Operating Instructions

STEREO MULTI CD RECEIVER

XC-P410M

STEREO DOUBLE CASSETTE TAPE DECK

CT-P410WR

SPEAKER SYSTEM

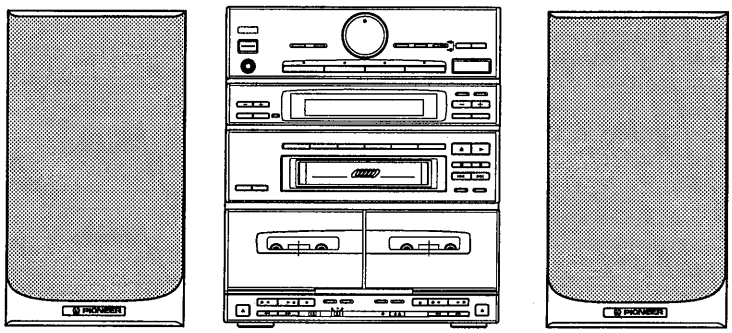
S-P410

(For European models)

S-P410V

(For U.S. and Canadian models)

- For U.S. and Canadian models, system model No. is **XS-P410M**.
- Illustration shows S-P410.



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure place. This is for your security.

"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."

THE POWER SWITCH IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

PIONEER®

The Art of Entertainment

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last (make sure that the power switch is off.)

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Do not connect either wire to the earth terminal of a three pin plug.
Equipment sold in the U.K. is not supplied with a power plug.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.
RETAIN INSTRUCTIONS – The operating instructions should be retained for future reference.
HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.
FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.
WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
LOCATION – The appliance should be installed in a stable location.
WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.
VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
POLARIZATION – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.
POWER LINES – An outdoor antenna should be located away from power lines.
NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
DAMAGE REQUIRING SERVICE – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:
- The power-supply cord or the plug has been damaged.
- Objects have fallen, or liquid has been spilled into the appliance.
- The appliance has been exposed to rain.
- The appliance does not appear to operate normally or exhibits a marked change in performance.
- The appliance has been dropped or the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.
OUTDOOR ANTENNA GROUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.
CART – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC NATIONAL ELECTRIC CODE

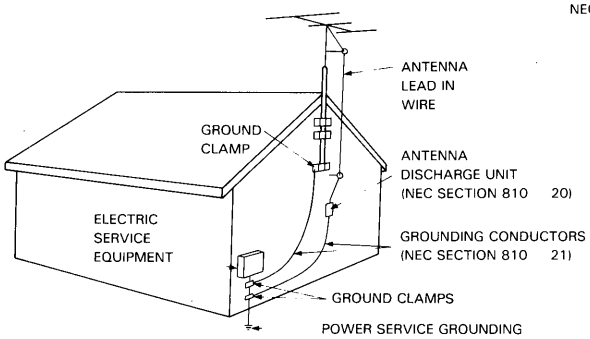


FIG. A

[FOR EUROPEAN AND U.K. MODELS]

CAUTION
This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.

The following caution label appears on your unit.

Location: rear of the unit

[FOR U.S. MODEL]
CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems"
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

[For Canadian model]
This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

Pre-caution
European (except for German and Italian) and the U.K. models are provided with LW band.
Other models are not provided with LW band.

CONTENTS

CAUTIONS REGARDING HANDLING 4
CONFIRM SUPPLIED ACCESSORIES 5
PUT BATTERIES INTO REMOTE CONTROL UNIT 5
REMOTE CONTROL OPERATIONS 5
CONNECTIONS 6
NAMES AND FUNCTIONS OF PARTS 8
SMART OPERATION 12
Memorizing your usual listening settings 12
Recalling the memory 12
SETTING THE CLOCK 13
TUNING INTO STATIONS 14
MEMORIZING STATIONS 15
Auto presetting 15
Manual presetting 16
Station recall 17
Scanning memorized stations 17
CAUTIONS REGARDING COMPACT DISC HANDLING ... 18
INSERT DISCS INTO THE MAGAZINE 19
LISTENING TO COMPACT DISCS 20
To play a compact disc 20
To stop playback and take out the magazine 20
Time display 21
VARIOUS OPERATIONS 21
Disc search-To search for a particular disc 21
Track search-To search for a particular track 21
Manual search-To search for a particular passage 22
To repeat playback (repeat play) 22
Random playback-To play all tracks in random order ... 22
Hi-Lite Scan - To playback a portion of each track 22
TO PLAY ONLY DESIRED TRACKS/DISCS 23
Program playback-To program tracks/discs in desired order 23
Programming a pause 24
To clear all of the program contents 24
HOW TO HANDLE CASSETTE TAPES 25
PLAYING TAPES 26
Basic operation 26
Music search-Skipping forward or backward to play back a desired selection 27
Relay playback 27
RECORDING 28
Recording on tape 28
Copying a tape 29
To erase the contents of a tape 29
A.S.E.S. (Auto Synchro Editing System) 30
ADJUSTING THE SOUND (SOUND FIELD CONTROL OPERATION) 31
Selecting a preset sound setting 31
Adjusting the sound in manual mode 31
To clear SOUND FIELD CONTROL settings 31
TIMER PLAYBACK 32
Timer setting 32
To check timer settings 33
To change timer settings 33
If you make a mistake while setting the timer 33
Turning the timer on and off 33
The SNOOZE function 33
SLEEP TIMER 33
Sleep timer-Automatically turns off power 33
TIMER RECORDING 34
Timer setting 34
To check timer settings 35
To change timer settings 35
If you make a mistake while setting the timer 35
Turning the timer on and off 35
MAINTENANCE 36
TROUBLESHOOTING 37
SPECIFICATIONS 39

CAUTIONS REGARDING HANDLING

Location

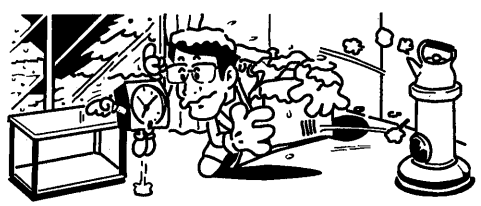
Install the unit in a well-ventilated location where it will not be exposed to high temperature or humidity.
Do not install the unit in a location which is exposed to direct rays of the sun, or near stoves or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the unit in a damp or dusty environment may also result in malfunction or accident. (Avoid installation near cookers, etc., where the unit may be exposed to smoke from oil, steam or heat.)

Precautions regarding installation

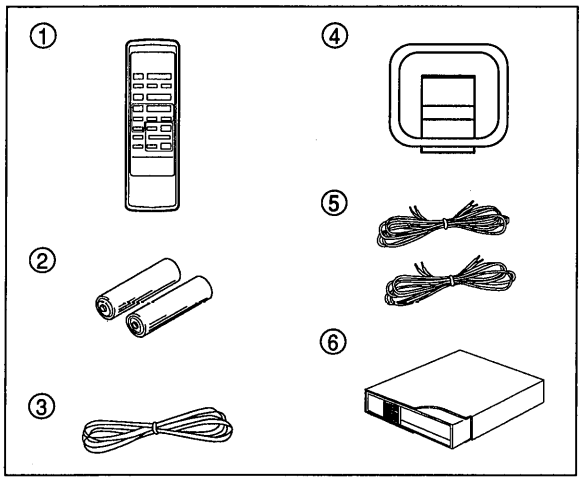
- Placing and using the unit for long periods on heat-generating sources will affect performance. Avoid placing the unit on heat-generating sources.
- Install the unit as far away as possible from your TV. Installation in close proximity to such equipment may cause noise or degradation of the picture.
- Such noise may be particularly noticeable when an indoor antenna is used. In such cases, make use of an outdoor antenna, or turn off the power to the unit.
- Please place this unit on a level surface.

Condensation

When this unit is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside, and the unit may not be able to attain its full performance. If this occurs, allow the unit to stand for about an hour or raise the room temperature gradually.

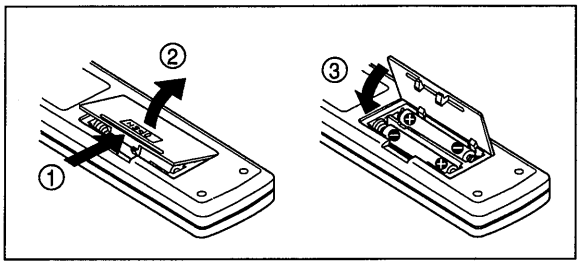


CONFIRM SUPPLIED ACCESSORIES



① Remote control unit X 1 (Supplied with the CT-P410WR)
② AAA/R03 dry cell batteries X 2
(Supplied with the CT-P410WR)
③ FM T-type antenna X 1
④ AM loop antenna X 1
⑤ Speaker cords X 2 (S-P410V only)
⑥ 6-Compact Disc Magazine X 1
(Called magazine in the explanatory text.)
NOTE:
The supplied magazine is for 12 cm discs only.

PUT BATTERIES INTO REMOTE CONTROL UNIT

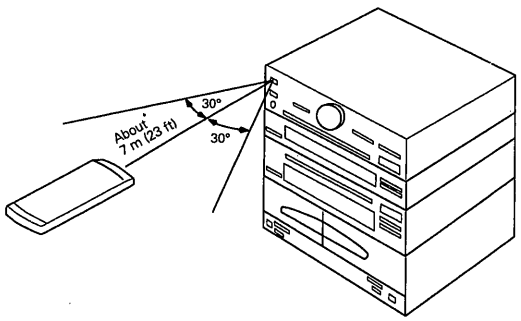


Open the battery compartment cover on the back of the remote control unit.
Insert size "AAA" (IEC R03) dry cell batteries into the battery compartment in accordance with the indications (⊕ , ⊖) inside the compartment.
Close the cover of the battery case.

Incorrect use of batteries may cause leakage or rupture.
Always be sure to follow these guidelines:
A. Always insert batteries into the battery compartment correctly matching the positive ⊕ and negative ⊖ polarities, as shown by the display inside the compartment.
B. Never mix new and used batteries.
C. Batteries of the same size may have different voltages, depending on brand. Do not mix different brands of batteries.

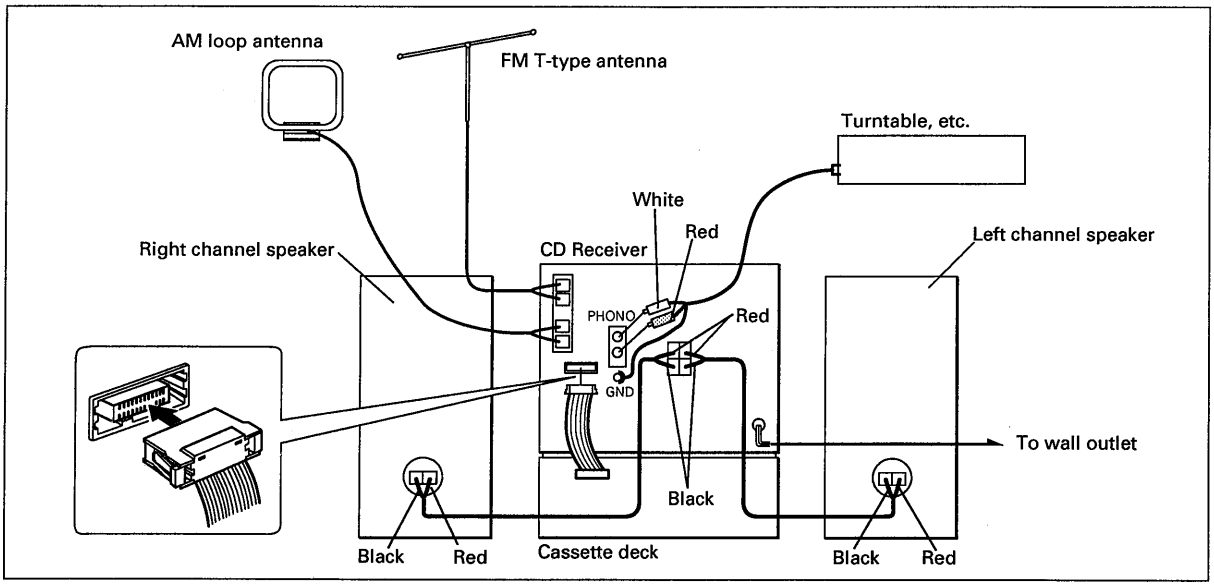
REMOTE CONTROL OPERATIONS

When operating the remote control unit, point the unit's infrared signal transmitter at the remote sensor window (SENSOR) on the front panel of the receiver. The remote control unit can be used within a range of about 7 meters (23 feet) from the remote sensor, and within angles of up to about 30 degrees.



NOTES:
- *If there is any obstacle between the remote control unit and the remote sensor window, or if the unit is held at too large an angle relative to the remote sensor window, the signal from the remote control unit will fail to reach the remote sensor.*
- *If the unit is operating in the vicinity of other appliances generating infrared rays, or if other remote control devices using infrared rays are used near the unit, the unit may operate improperly. Conversely, if the receiver's remote control unit is operated in the vicinity of another appliance which uses an infrared remote control device, the other appliance may operate improperly. If this should happen, change the place of installation so that improper operation does not occur.*
- *If the range of operation of the remote control unit becomes too short, replace the batteries.*
- *When the unit is not to be used for a long period of time (more than one month), remove the batteries to prevent them from leaking inside the compartment. If leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.*
- *Do not place books or other objects on the remote control unit, since they might depress the keys and run down the batteries.*
- *If the remote control sensor window is in a position where it receives strong light such as sunlight or fluorescent light, control may not be possible.*

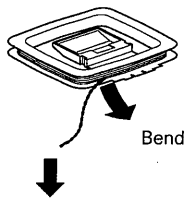
CONNECTIONS



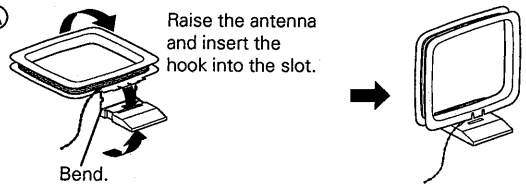
- Plug the power cord into the AC wall outlet only after all the connections have been completed.
- Be sure to connect an antenna. If you do not, broadcast signal reception will not be possible.

1 Assemble AM loop antenna.

- Straighten ends of the twisted wires.
- Assemble as shown in Ⓐ when placing on a desk, etc.
- To install in a wall, etc., fix as shown in Ⓑ.

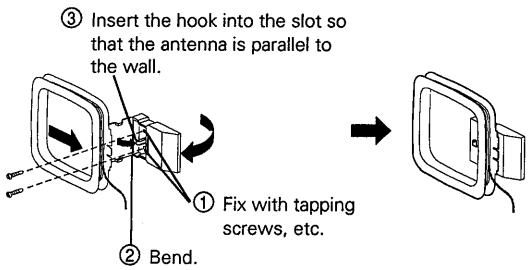


Ⓐ



- Place the antenna on a level surface and rotate it to find the orientation that yields the best reception.

Ⓑ



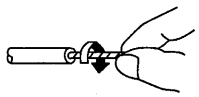
2 Connect AM loop antenna and FM indoor antenna to the unit's antenna terminals in the same way as the speaker.

3 Connect the speaker cords to the speaker terminals.

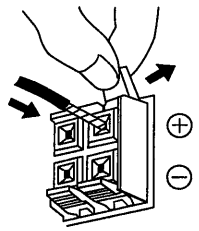
Connect the red cords to the "+" (red) terminals and the black cords to the "–" (black) terminals.

- With the S-P410V model, connect the speaker cords to the speaker system .

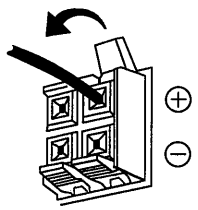
① **Twist the wire strands.**



② **Push away the tab and insert the cord into the terminal.**



③ **Pull back the tab. Be sure to tighten the cords firmly.**



NOTE:

Do not allow the conductors of the cords to project out of the terminals or to come into contact with other conductors. A breakdown or failure may occur when conductors touch.

Speaker impedance

Connect speaker systems with a nominal impedance ranging from 8 to 16 Ω.

4 Connect the flat cable of the cassette deck to the flat cable terminal of the receiver.

Pre-caution:
When connecting or disconnecting the flat cable, do so only after disconnecting the power plug from the AC wall outlet.

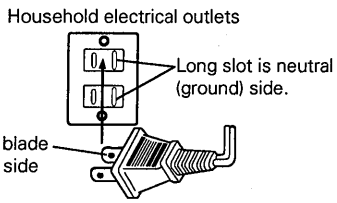
5 When using a turntable, connect the output cord to the PHONO INPUT jacks of this unit.

For the U.S. and Canadian models, VIDEO INPUT jacks are provided instead of PHONO INPUT jacks. When connecting a video cassette recorder, connect the audio output jacks to the VIDEO INPUT jacks of this unit.

6 Finally, connect the power cord to the AC wall outlet.

NOTE:
Insert the plugs securely into the jacks. Improper connection can lead to sound distortion or malfunction.

CONNECTING THE POWER CORD
(For U.S. and Canadian models)
Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.

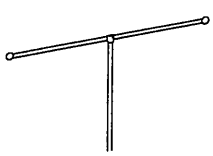


ANTENNA CONNECTIONS

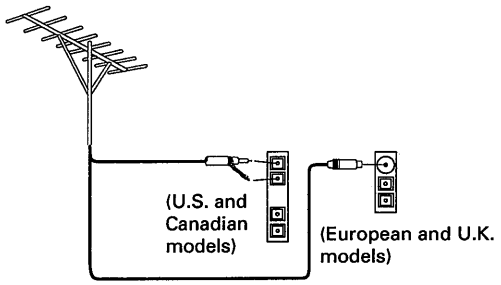
Radio reception is not possible unless the antenna is properly connected.
The strength of broadcast signals varies from one area to another. Signal propagation is especially poor in metropolitan areas, where there are many tall buildings, and in mountainous areas. Proper antenna installation is vital to good reception.

FM ANTENNA

FM indoor antenna
Stretch the antenna out to its full "T" shape, and affix it to a wall, etc.



External FM antenna installation
Use an external antenna when the signals from stations are weak and cannot be picked up by the accessory FM antenna, or when the sound heard is accompanied by large amounts of noise.

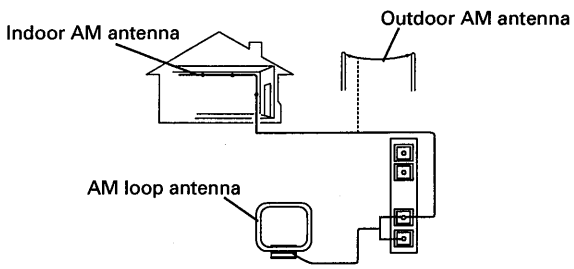


AM ANTENNA

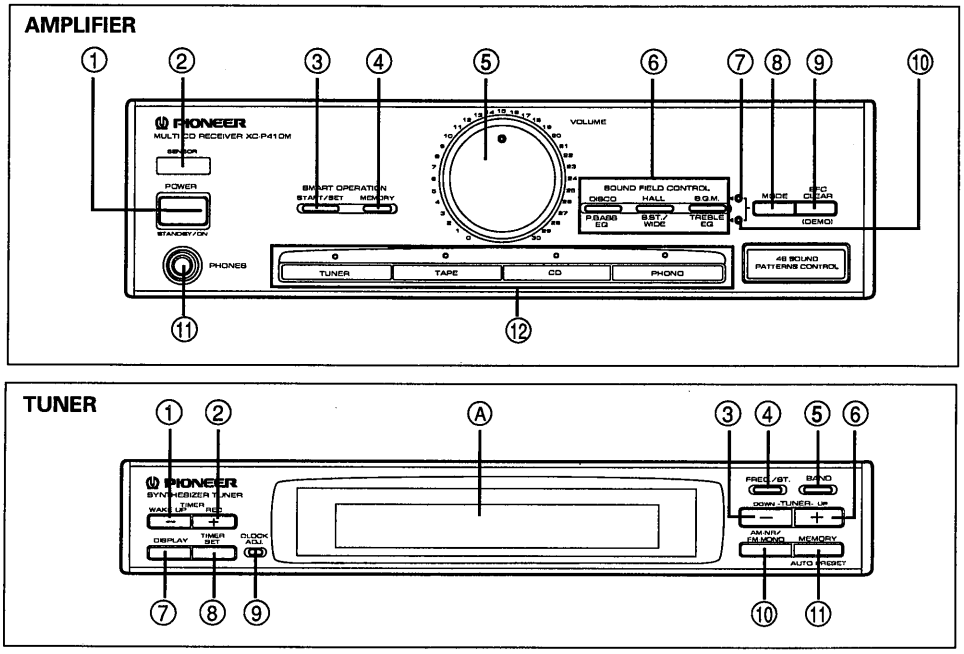
The antenna should be placed at a distance from the tuner, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.

External AM antenna
Indoor AM antenna
Prepare a vinyl-coated wire (5 to 6 meters long). Secure one end to the AM terminal and the other end to a wall or other high location.
Outdoor AM antenna
If reception is still poor even when a lead antenna has been fully extended indoors, stretch out a vinyl-coated wire and secure it outdoors.

NOTE:
Do not detach the AM loop antenna when using an external AM antenna.



NAMES AND FUNCTIONS OF PARTS



AMPLIFIER

① POWER STANDBY/ON switch
Press to turn the power on and off (STANDBY).
② Remote sensor window (SENSOR) (p. 5)
③ SMART OPERATION START/SET button (p. 12)
④ SMART OPERATION MEMORY button (p. 12)
⑤ VOLUME control
⑥ SOUND FIELD CONTROL buttons (DISCO/P.BASS EQ, HALL/S.ST./WIDE, B.G.M./TREBLE EQ) (p. 31)
⑦ Preset mode indicator (p. 31)
⑧ MODE button (p. 31)
⑨ SFC CLEAR/DEMO button (p. 8, 31)
⑩ Manual mode indicator (p. 31)
⑪ Headphones jack (PHONES)
⑫ Function buttons/indicators
European and U.K. models: (TUNER/TAPE/CD/PHONO)
U.S. and Canadian models: (TUNER/TAPE/CD/VIDEO)

Auto Function

This model is equipped with "Auto Function" operation, so when the switch for CD PLAY, RANDOM, HI-LITE SCAN, DISC NUMBER, PLAY (tape), BAND or TUNER UP/DOWN (+/–) is pressed, the function switches automatically. Use the PHONO function button to select the component connected to the PHONO jacks, since Auto Function is not effective for this.

NOTE:

The function cannot be switched during recording. (Auto Function does not operate either.)

TUNER

① TIMER WAKE UP/– button (p. 13, 32, 34)
② TIMER REC/+ button (p. 13, 32, 34)
Ⓐ Display (p. 9)
③ TUNER DOWN/– button (p. 14, 17)
④ FREQ./ST. button (p. 14, 17)
⑤ BAND button (p. 14)
⑥ TUNER UP/+ button (p. 14, 17)
⑦ DISPLAY button (p. 14, 21, 28)
⑧ TIMER SET button (p. 32, 34)
⑨ CLOCK ADJ. button (p. 13)
⑩ AM-NR/FM-MONO button (p. 14)
⑪ MEMORY/AUTO PRESET button (p. 15, 16)

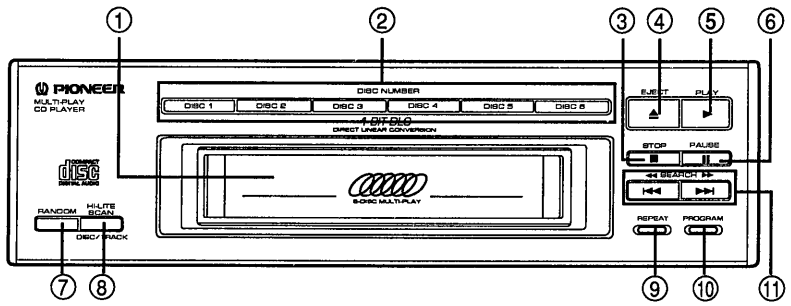
Demo Function

To enter the demo mode, press DEMO when power is off. The unit performs the SMART OPERATION (page 12) and automatically switches the preset setting of the SOUND FIELD CONTROL. During demo mode, function buttons and PLAY button can be used, so you can enjoy desired program source. For example, to listen to CD with demo function, load a CD into the player before carried out demo function.

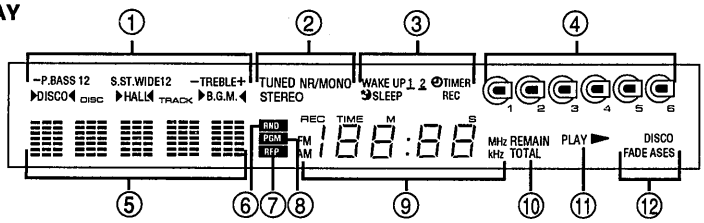
To cancel demo mode:

Press POWER STANDBY/ON switch, MODE button, SFC CLEAR/DEMO button or one of the SOUND FIELD CONTROL buttons.

MULTI-PLAY CD PLAYER



Ⓐ DISPLAY

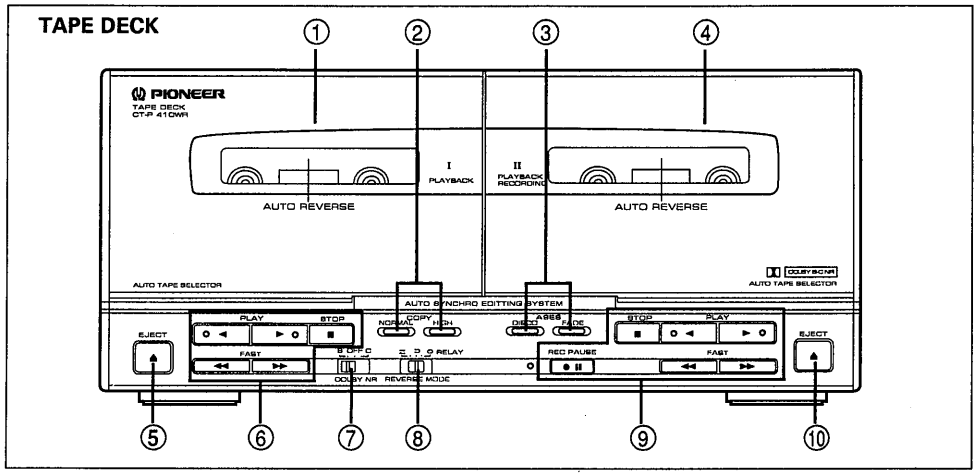


MULTI-PLAY CD PLAYER

① **Magazine insertion slot**
② **DISC NUMBER buttons (DISC 1 - DISC 6) (p. 21)**
③ **STOP button (■) (p. 20)**
④ **EJECT button (⏏) (p. 20)**
⑤ **PLAY button (►) (p. 20)**
⑥ **PAUSE button (❚❚) (p. 20)**
⑦ **RANDOM button (p. 22)**
⑧ **HI-LITE SCAN DISC/TRACK button (p. 22)**
⑨ **REPEAT button (p. 22)**
⑩ **PROGRAM button (p. 23)**
⑪ **SEARCH buttons (◄◄/►►, I◄◄/►►I) (p. 21, 22)**

Ⓐ DISPLAY

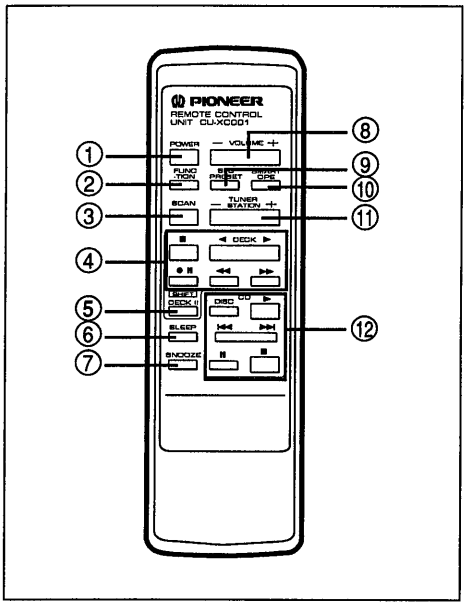
① **Sound field control indicators**
Display SOUND FIELD CONTROL settings.
② **Tuner indicators**
Indicate the tuning mode.
③ **Timer indicators**
Display timer settings.
④ **Disc number indicators**
⑤ **Function display**
Displays the selected function. In the TUNER mode, this displays the station No., and when playing a CD it displays the disc No. and track No.
⑥ **Random indicator**
⑦ **Repeat indicator**
⑧ **Program indicator**
⑨ **Frequency/Time display**
In TUNER mode, frequency is displayed. In any other mode it displays the time.
⑩ **REMAIN/TOTAL indicator**
In CD mode, "REMAIN" shows the remaining play time and "TOTAL" shows the total play time.
⑪ **PLAY ► indicator**
⑫ **ASES (Auto Synchro Editing System) indicators**
Lights when A.S.E.S. is performed.



TAPE DECK

① DECK I cassette door
② COPY buttons (NORMAL/HIGH) (p. 29)
③ ASES (Auto Synchro Editing System) buttons (DISCO/FADE) (p. 30)
④ DECK II cassette door
⑤ DECK I EJECT button (▲) (p. 26)
⑥ DECK I operation buttons (PLAY ◄ ►, STOP ■ , FAST ◄◄ ►►) (p. 26, 27)
⑦ DOLBY* NR switch (p. 26)
⑧ REVERSE MODE switch (⇄, ⊃, ↻ RELAY) (p. 26, 27)
⑨ DECK II operation buttons (PLAY ◄ ►, STOP ■, FAST ◄◄ ►►, REC PAUSE ● ❚❚) (p. 26, 27, 28)
⑩ DECK II EJECT button (▲) (p. 26, 28)

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.



REMOTE CONTROL UNIT

① POWER button

② FUNCTION button

Each time this button is pressed, the function changes in the following sequence: TUNER → TAPE → CD → PHONO (VIDEO) → TUNER

③ SCAN button

In TUNER mode: This button is used for scanning preset stations **(p. 17)**

In CD mode: This button is used for Hi-Lite Scan. **(p. 22)**

④ DECK operation buttons

(◄ ►DECK Play, ■ Stop, ◄◄ ►►Fast, ● II Rec pause) (p. 26, 27, 28)

⑤ SHIFT DECK II button

To operate Deck II, press the desired deck operation button while pressing this button.

⑥ SLEEP button (p. 33)

⑦ SNOOZE button (p. 33)

⑧ VOLUME –/+ button

⑨ SFC PRESET button (p. 31)

Each time this button is pressed, the SOUND FIELD CONTROL setting changes in the following sequence: DISCO → HALL → BGM → clear → DISCO

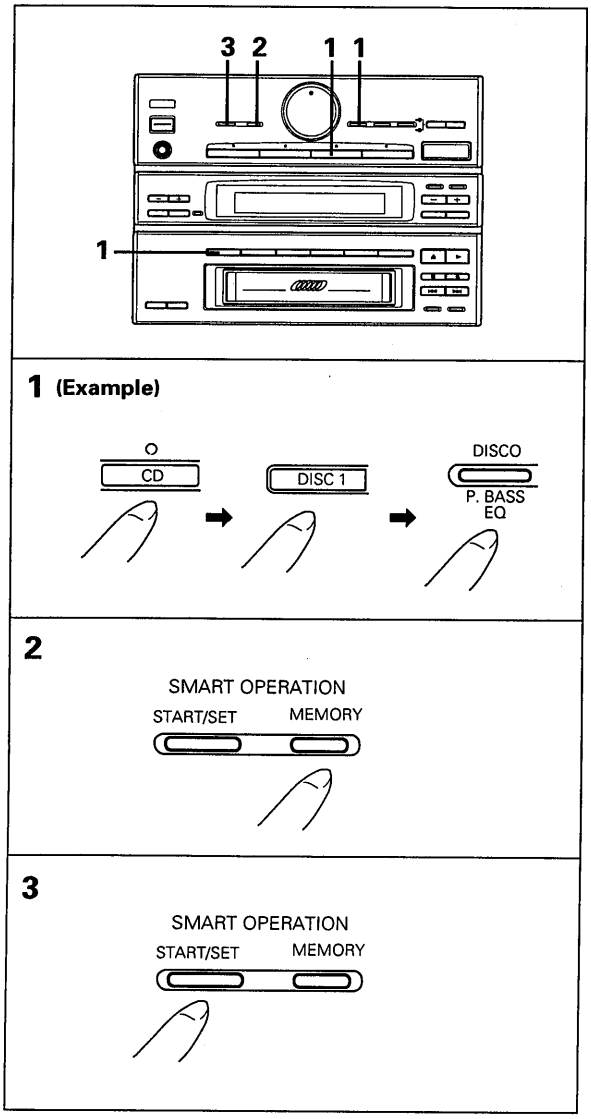
⑩ SMART OPE. button (p. 12)

⑪ TUNER STATION –/+ button (p. 17)

⑫ CD operation buttons

(► Play, ■ Stop, II Pause, ⏮ ⏭Track search, DISC) (p. 20, 21, 22)

SMART OPERATION



Memorizing your usual listening settings

This function lets you recall your usual listening settings by simply pressing a single button.
The following settings can be memorized:

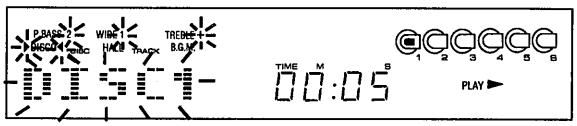
- Function (CD, TUNER, TAPE, PHONO or VIDEO)
- SOUND FIELD CONTROL settings
- CD disc No., random playback setting
- Tuner Station No.

1 Select the appropriate settings to be memorized.

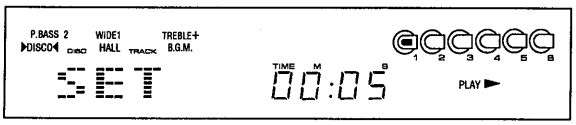
Example: To carry out the DISCO setting and DISC No. 1 is played.

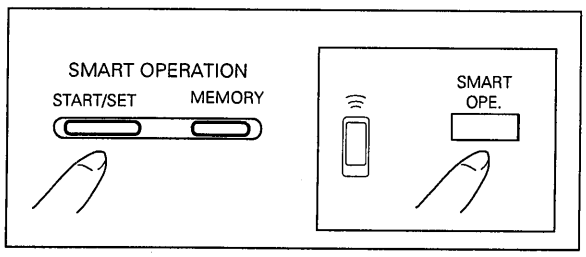
2 Press SMART OPERATION MEMORY.

The display of the various settings to be memorized will flash.



3 Press SMART OPERATION START/SET within five seconds.





Recalling the memory

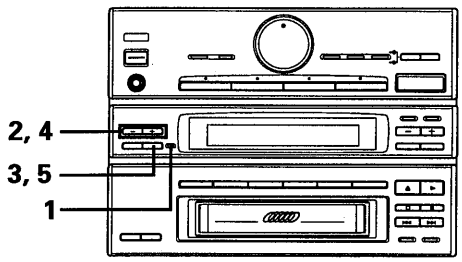
Press SMART OPERATION START/SET.
SMART OPERATION display flashes on the display for about 2 seconds.

- Memory recall is also possible when power is off.
- When the memorized function cannot be played, the function is switched automatically in the following sequence: Memory recall → CD → TAPE → TUNER → CD.

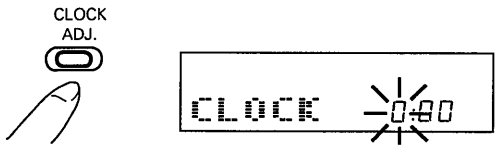
NOTE:
If the AC power cord is unplugged or a power failure occurs, the memorized settings will be erased.

Operations indicated by the [ ] mark are performed with the remote control unit.

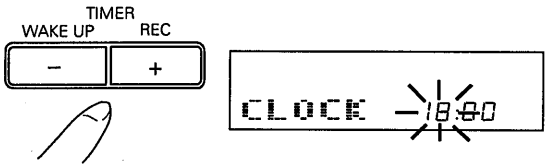
SETTING THE CLOCK



1

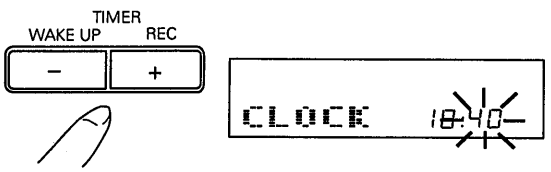


2

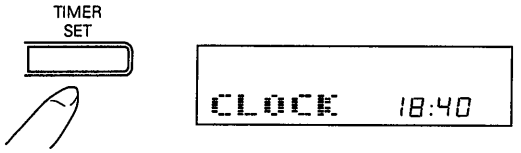


3

4



5



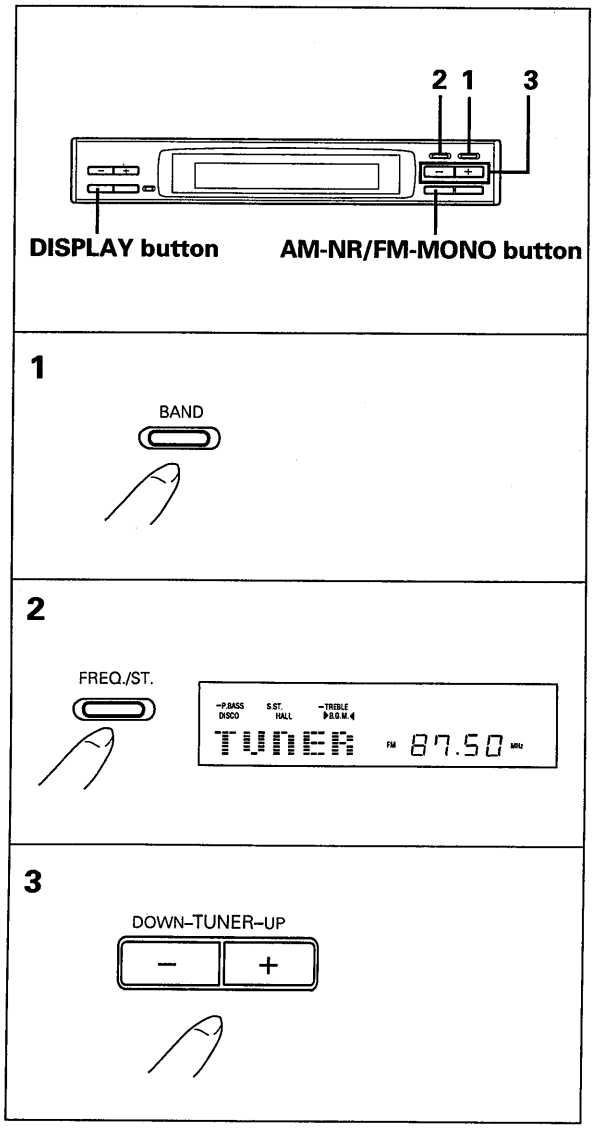
- Set the clock when it has been incorrectly set, or when power has been cut to the unit.
- This clock provides a 24 hour display.
- The clock cannot be set by remote control.

Example: Setting the clock to 18:40

1 Press CLOCK ADJ.
2 Use WAKE UP (–) and REC (+) to set the hour.
3 Press TIMER SET.
4 Use WAKE UP (–) and REC (+) to set the minute.
5 Press TIMER SET when "00" seconds of that minute are reached for precise adjustment.

- After connecting the power cord to an AC wall outlet, be sure to set the present time. Timer playback and timer recording are not possible unless the time has been set.
- The time indication will appear as "- -:- -" if the AC power cord is unplugged or a power failure occurs. Be sure to set the time again upon reconnecting power.

TUNING INTO STATIONS



- Broadcast reception is not possible unless an antenna is connected, so be sure to connect one.

1 Select AM (MW or LW) or FM with BAND.

2 Press FREQ./ST. to select frequency mode.
"TUNER" appears in the display.

3 Press TUNER UP (+) for higher frequencies or DOWN (–) for lower frequencies.
The TUNED indicator lights up when a station of sufficient signal strength is tuned in.

• One step tuning
Press TUNER UP (+) or DOWN (–) and release quickly. The frequency will change by one step each time the button is pressed. Press as many times as necessary to tune in the desired station.

• Auto tuning
Press TUNER UP (+) or DOWN (–) until the frequency starts to change (1-2 sec.), then release it. The tuner will automatically search for a broadcasting station and stop when one is found, and the TUNED indicator lights up. To search for another station, press again.

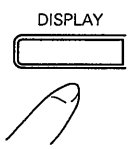
Note for European and U.K. models:
Auto tuning is not possible on the LW band.

• High speed manual tuning
Keep TUNER UP (+) or DOWN (–) pressed. The frequency changes continuously, and stops when the switch is released.

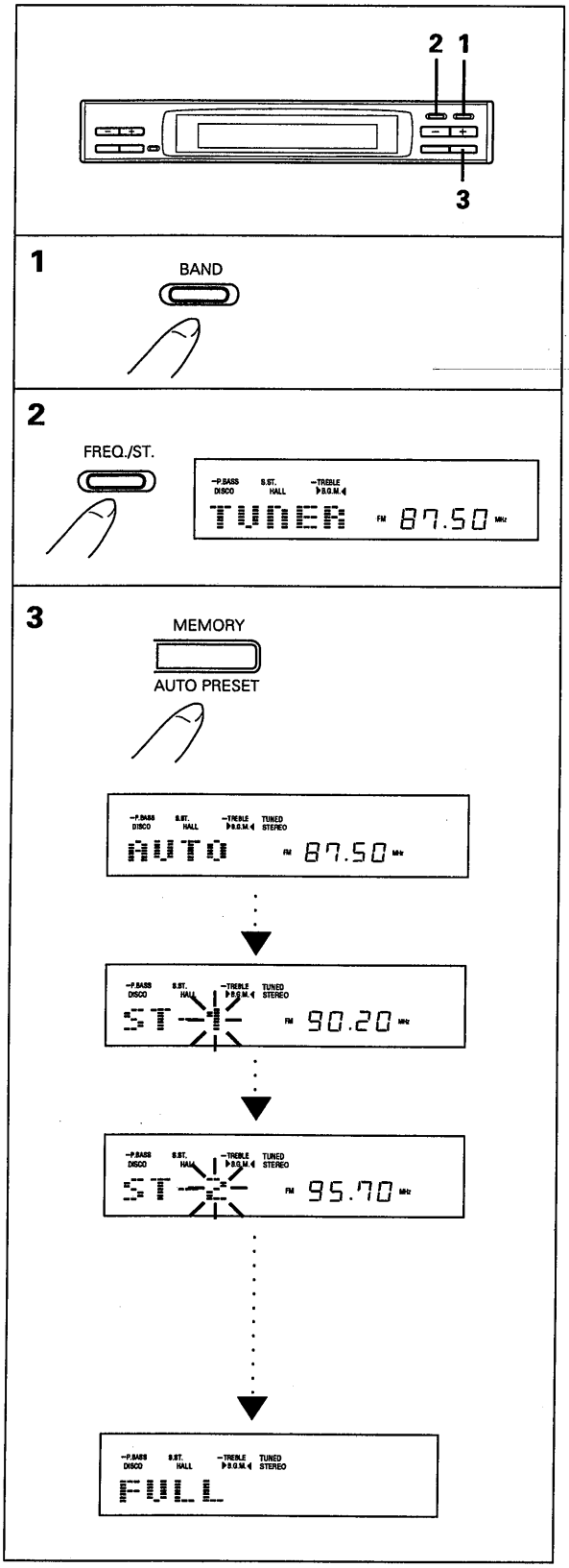
AM-NR/FM-MONO button
During AM reception: Cuts out AM broadcast noise to give you a much clearer sound.
During FM reception: Switches between stereo and monaural modes when listening to a stereo broadcast. If there is a lot of noise in the stereo position, switch to MONO and the noise will be suppressed.

Last station memory
The last received AM and FM stations remain stored regardless of function and/or POWER switching.

To change the display mode:
Each time DISPLAY is pressed, the display switches between tuner mode and the current time.



MEMORIZING STATIONS



Auto presetting

Up to 24 FM/AM stations can be automatically memorized.

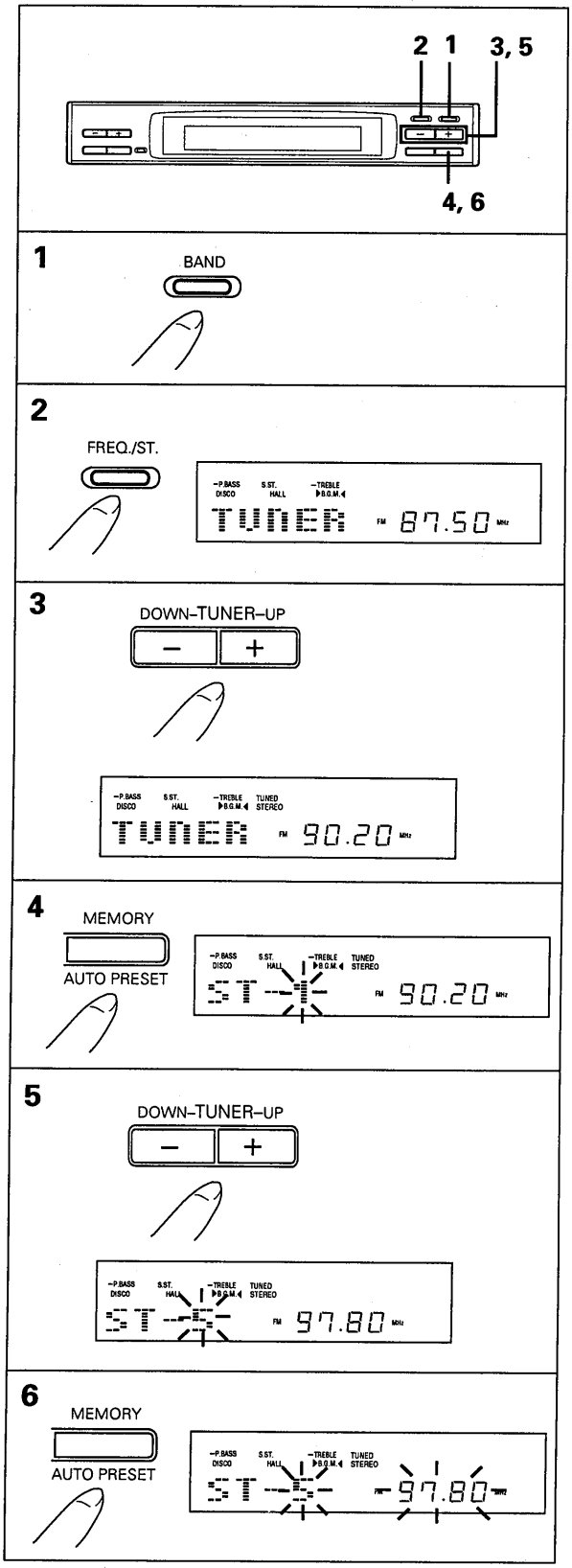
1 Select AM (MW) or FM with BAND.

2 Use FREQ./ST. to select frequency mode.
"TUNER" appears in the display.
If required, the frequency from which auto presetting starts can be selected with the TUNER DOWN (–)/UP(+).

3 Keep AUTO PRESET pressed for more than 5 seconds.
Auto presetting starts from the current station.
The reception frequencies are scanned for receivable stations and they are automatically stored in the station memory starting from ST-1.
When 24 stations are stored, "FULL" appears in the display.

NOTES:

- *To cancel the auto presetting operation, press BAND, TUNER UP (+) or TUNER DOWN (–).*
- *Auto presetting is not possible on the LW band.*



Manual presetting

- Up to 24 FM/AM stations can be memorized at random.
- For FM reception, the FM MONO setting can be memorized. For AM reception, the AM-NR ON or OFF setting can be memorized.

Example: To store FM station with a frequency of 97.80 MHz in station No. 5.

1 Select AM (MW or LW) or FM with BAND.

2 Press FREQ./ST. to select frequency mode.
"TUNER" appears in the display.

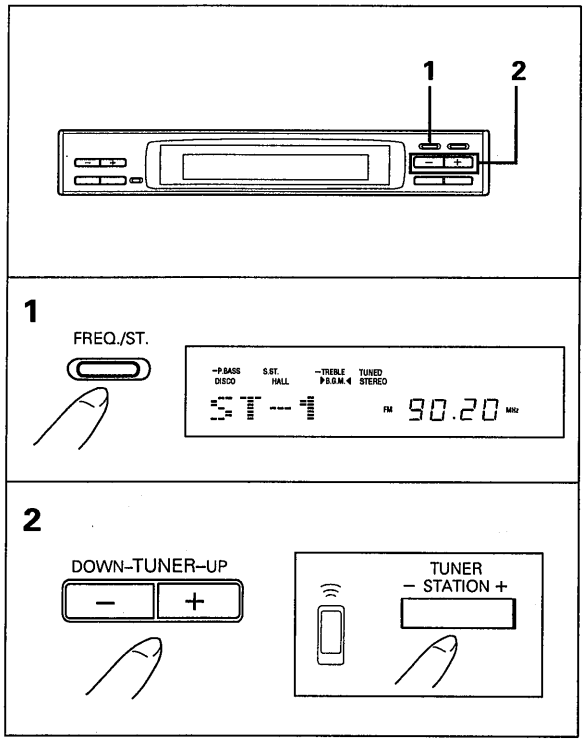
3 Tune in the desired station with TUNER UP (+) or DOWN (–).

4 Press MEMORY.
Station No. appears in the display.

5 Select the station number to be memorized with TUNER UP (+) or DOWN (–).
Operate while the display is flashing (it flashes for about 5 seconds).

6 Press MEMORY.
Operate while the display is flashing (it flashes for about 5 seconds).
The displayed frequency is stored in the selected station No. Repeat steps 2 through 6 to memorize up to 24 stations.

NOTE:
Manual presetting is also carried out in Station mode.



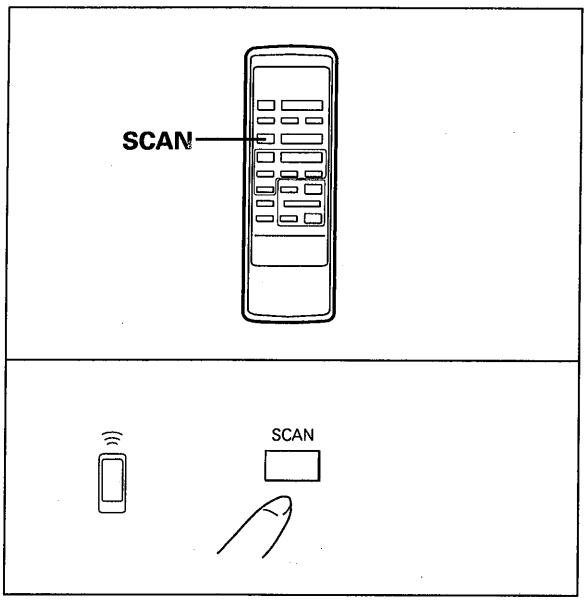
Station recall

1 Press FREQ./ST. to select station mode.
Station No. appears in the display.

2 Select the station No. you want to recall with TUNER UP (+) or DOWN (–).

NOTES:

- *The memorized stations will not be erased even if the power is turned off. However, if the AC power cord is unplugged or a power failure occurs, the memorized stations will be erased. (If the AC power cord is unplugged, the memorized stations will be preserved for few days.)*
- *If the memorized stations have been erased, memorize them again.*



Scanning memorized stations

1 Press SCAN on the remote control unit while the unit is in the tuner mode.
When each memorized station is received, sound can be heard for about 5 seconds.

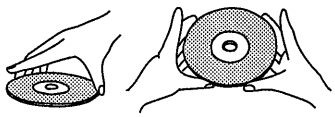
2 Press SCAN again as soon as the desired station is tuned in.

CAUTIONS REGARDING COMPACT DISC HANDLING

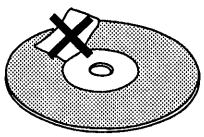
CARE OF DISCS

- With this player, use discs which display the mark shown below. (Optical audio digital discs.)

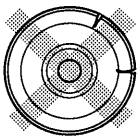
- When holding discs, do not touch their signal surfaces. Hold by the edges, or by one edge and the center hole.



- Do not affix gummed labels or tape to the label surfaces. Also, do not scratch or damage the label.



- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.

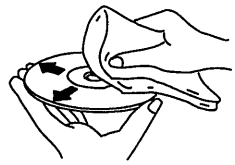


NOTE:

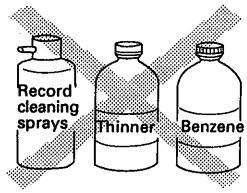
- *In order to play an 8-cm CD you will need a special Multi-Play Magazine (JD-M108 or JD-M308) which is sold separately. Be sure to read thoroughly the Operating Instructions before using it.*
- *8-cm CD Adaptors*
  It is possible that even an adaptor which meets recommended standard CD specifications will not be usable with the CD player. It is recommended that the special Multi-Play Magazine (JD-M108 or JD-M308) be used.
- *Never load an 8-cm CD or its adaptor into a standard 12-cm magazine. This may seriously damage the CD player.*

CLEANING DISCS

- Fingerprints or smudges on the surface of a disc will not directly affect the recorded signals, but depending on the degree of contamination, the brightness of the light reflected from the signal surfaces may be reduced, causing degradation of sound quality. Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery.

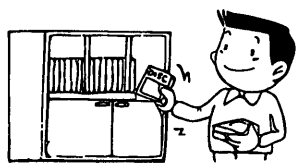


- If a disc becomes very dirty, dip a soft cloth in water, and after wringing it out well, wipe the dirt away gently. Remove any water drops with another soft, dry cloth.
- Do not use record cleaning sprays or anti-static agents on discs. Never clean discs with benzene, thinner, or other volatile solvents, since damage to the disc surface may result.



STORING DISCS

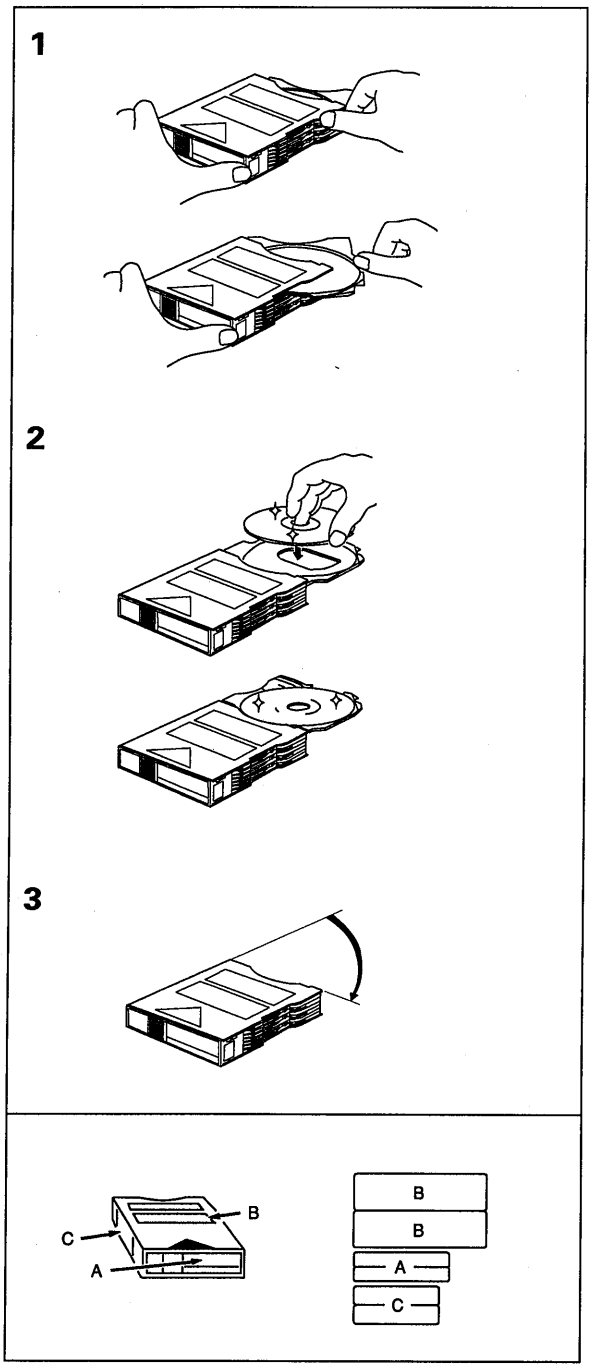
- Discs are made of the same kinds of plastic used for conventional analog audio records. Be careful not to allow discs to warp; always store discs in their cases vertically, avoiding locations with high heat or humidity, or extremely low temperatures. Avoid leaving discs in cars, since the seat of a car in direct sunlight can become extremely hot.
- Always read and abide by the precautionary notes listed on disc labels.



CD LENS CLEANER

The player's pickup lens should not become dirty in normal use, but if for some reason it should malfunction due to soiling, ask your nearest PIONEER authorized service center. Lens cleaners for CD players are commercially available, but special care should be exercised in their use since some may cause damage to the lens.

INSERT DISCS INTO THE MAGAZINE



Insert any discs which you may have into the supplied magazine. Up to six discs may be inserted. The numbering of the discs begins with 1 at the topmost tray, and then increases in order downwards to 6 for the lowest tray. The magazine has a window through which the pulled-out disc tray can be checked. Even during playback, the number of the disc being played back can be checked through this window.

1. **Pull out only one disc tray.**
2. **Position discs with the label side downward.**
3. **Put the disc tray back as it was originally.**
4. **Insert other discs by repeating steps 1 to 3.**

CAUTION:

- *Please make sure you only pull out one disc tray at a time. (When a disc tray has been pulled out, do not pull out other disc trays.)*
- *If discs are inserted label side upward, it will not be possible for them to be played. Please make sure you insert them with the label side downward.*
- *Objects other than discs (song cards, explanations of disc contents, etc.), must never be inserted into the disc trays.*
- *Do not touch the playing surface of discs (iridescent side) with hands or fingers.*

AFFIXING LABELS TO THE MAGAZINE

- Always attach the labels provided in the designated locations. Correct operation may not be possible if labels or tape are attached in other locations.
- The following are convenient ways of using labels:
  A: For titles
  B: For disc names
  C: For classification
- Do not attach labels on top of other labels.

Additional magazines identical to the one supplied are available as options (*JD-M100, JD-M200, JD-M300, JD-M108, JD-M308).
Please use them to make your own disc library, with separate magazines for each artist or genre.

* JD-M100, JD-M200, JD-M300 .. Magazine for 12-cm discs
  JD-M108, JD-M308 ..... Magazine for 8-cm discs

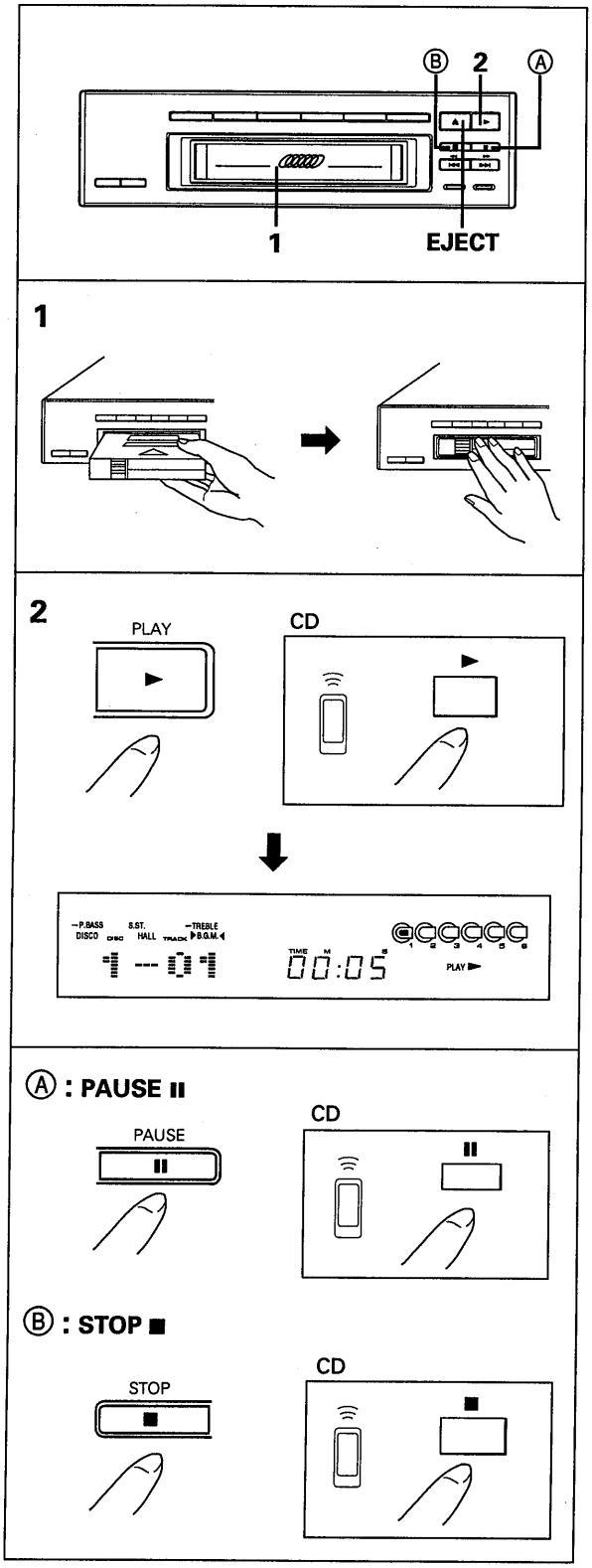
NOTE:
Both 12-cm discs and 8-cm discs cannot be installed together in a magazine.

For U.S. customers only

You may purchase additional Pioneer six-compact-disc magazines from your dealer. If however, they are not available at your dealer in the United States, you may order from:

PIONEER ELECTRONICS SERVICE, INC.
2265 East 220th Street
P.O. Box 1760, Long Beach
CA. 90801-1760
U.S.A.
Phone #(800)421-1404

LISTENING TO COMPACT DISCS



To play a compact disc

1 Insert a magazine, pushing it in until a click sound is heard.

- The first disc is automatically set for playback.

2 Press PLAY ► to start playback.

Ⓐ To pause playback temporarily:

Press PAUSE ❚❚.
Pressing PAUSE ❚❚ again or PLAY ► resumes playback from the position where pause mode was entered.

Ⓑ To stop playback:

Press STOP ■. The player returns to the beginning of the first track on the disc at which playback was stopped.

NOTE:
If the function is switched during CD playback, the CD player enters stop mode automatically.

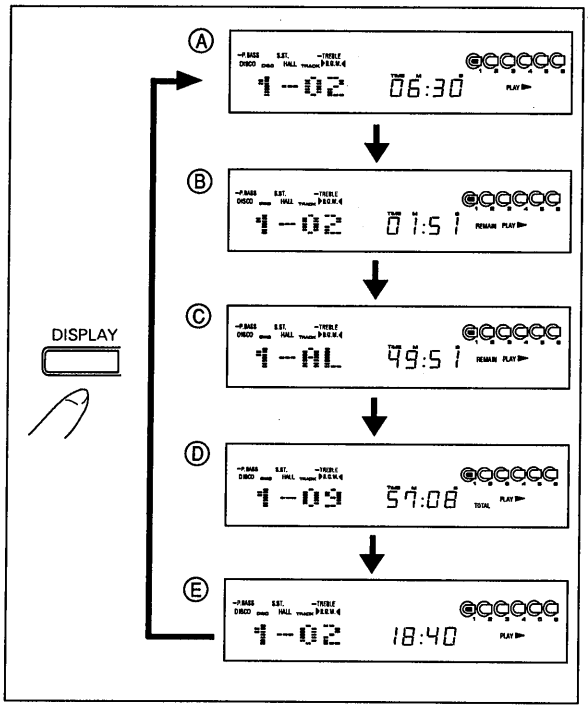
To stop playback and take out the magazine

Press EJECT ⏏, remove the magazine.

Cautions regarding handling of magazines

- When inserting a magazine into the player, make sure that the direction of insertion is correct.
- After use, store in the case provided. Do not place in locations subjected to high temperatures or exposed to direct sunlight.
- Do not take magazines apart.
- Be careful not to drop, or hit magazines against things. Also do not apply strong force to trays which have been withdrawn.
- Application of benzene, thinner, insecticide or other volatile liquids to a magazine may damage the surface, so keep magazines away from such substances.

CAUTION:
Do not unplug the power cord during playback, as this could result in damage to the disc.



Time display

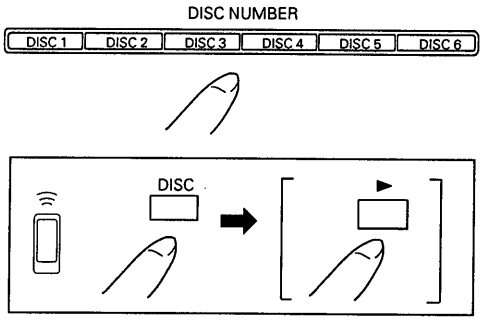
During playback, pressing the DISPLAY button changes the time display in the following sequence: Ⓐ TIME (elapsed playback time of the track being played) → Ⓑ REMAIN (remaining playback time of the track being played) → Ⓒ ALL REMAIN (remaining playback time from the playing point to the end of the disc) → Ⓓ TOTAL (total playback time of the disc) → Ⓔ Current time.

- With track No. 24 or above, REMAIN time Ⓑ cannot be displayed.
- During program playback or random playback, ALL REMAIN time Ⓒ cannot be displayed.
- During Program playback, the number of program steps can be displayed with the TOTAL setting Ⓓ.
- During recording a CD on Deck II, elapsed recording time will be displayed after the current time Ⓔ.

VARIOUS OPERATIONS

Disc search - To search for a particular disc

During playback or stop mode

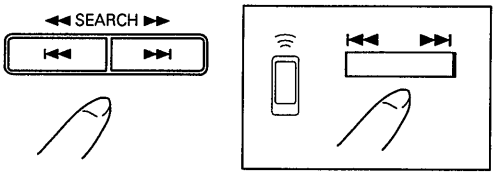


The player searches for the specified disc and playback starts from the beginning of that disc.
With the remote control unit, each time DISC is pressed the disc No. changes. In stop mode, press PLAY ► to start playback.

NOTE:
If the disc number of a tray which does not contain a disc (disc symbol indicator is not lit) is selected, playback cannot start from that disc number.

Track search - To search for a particular track

During playback or pause mode



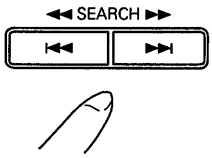
When ►►I is pressed once or a number of times, playback is advanced to the beginning of a track located after the track being played. The position of the located track corresponds to the number of times the button is pressed.
When I◄◄ is pressed once, playback returns to the beginning of the track being played. When this button is pressed more than once, playback is returned to a track located before the track being played. The position of the located track corresponds to the number of times the button is pressed.

NOTES:

- *During normal playback, Track Search can be carried out on one disc only.*
- *During program playback, Track Search can be carried out in one programmed step only.*

Manual search - To search for a particular passage

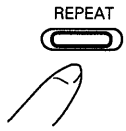
During playback or pause mode



While ►►I/►► is kept pressed, playback rapidly advances toward the end of the disc. When playback reaches the end of the disc, the player enters pause mode and "End" is displayed. While ◄◄/I◄◄ is kept pressed, playback rapidly reverses toward the beginning of the disc.
When the desired passage is reached, release ►►I/►► or ◄◄/I◄◄. The player enters the original mode (playback or pause) where ►►I/►► or ◄◄/I◄◄ is released.

- During normal playback, Manual Search can be carried out on one disc only.
- During program playback, Manual Search can be carried out in one program step only.
- During Hi-Lit Scan, the manual search can be carried out within the track being played.

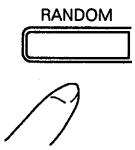
To repeat playback (repeat play)



When REPEAT is pressed, all tracks will be repeated. (REP indicator lights.)
In the repeat mode, programmed play, random play and Hi-Lite Scan will be repeated.

- To exit repeat mode, press REPEAT so that REP indicator goes off.
- To repeat one track, program one track and press REPEAT. (See page 23.)

Random playback - To play all tracks in random order



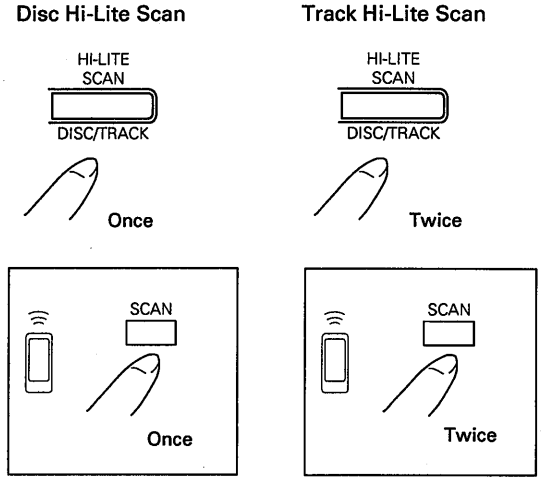
When RANDOM is pressed, the RND indicator lights and all tracks on all discs are played in a random order.
After all the tracks are played, the player enters stop mode.

NOTE:

- *Random playback cannot be applied to the programmed tracks.*
- *If the RANDOM is pressed during program playback, the programmed contents will be erased.*

Hi-Lite Scan - To playback a portion of each track

During stop mode



Disc Hi-Lite Scan
When HI-LITE SCAN is pressed once during stop mode, playback starts from a point 1 minute after the beginning of the first track, and the first track of each disc is played for about 10 seconds. The disc No. flashes during Disc Hi-Lite Scan mode. After the first tracks of all discs are scanned, the player enters stop mode.

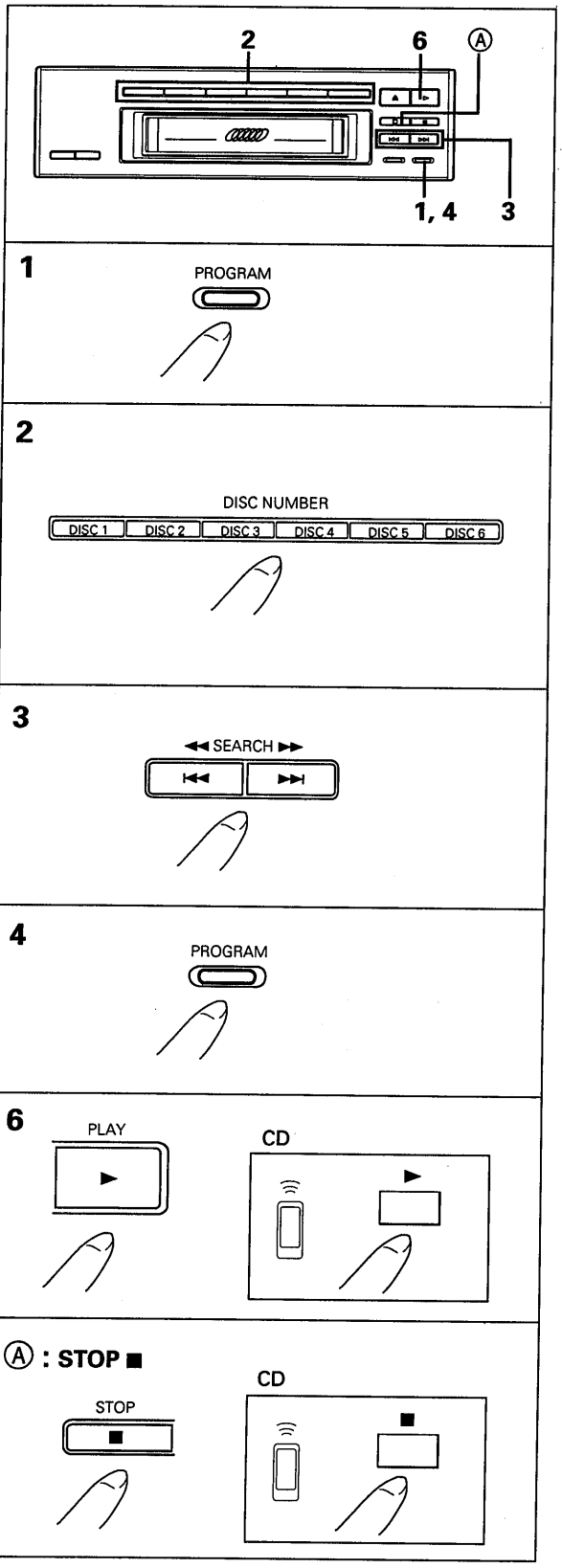
Track Hi-Lite Scan
When HI-LITE SCAN is pressed twice during stop mode, playback starts from a point 1 minute after the beginning of the track; each track is played for about 10 seconds. The track No. flashes during Track Hi-Lite Scan mode. After all tracks of all discs are scanned, the player enters stop mode.

To exit Hi-Lite Scan mode
Press STOP ■ or PLAY ►. When PLAY ► is pressed, normal playback starts from the current point.

NOTES:

- *When HI-LITE SCAN is pressed once during normal playback mode or pause mode, the player memorizes the time of the current point and Track Hi-Lite Scan playback is carried out from the memorized time on each track. Each time HI-LITE SCAN is pressed, the mode switches between Disc Hi-Lite Scan and Track Hi-Lite Scan .*
- *When manual search is carried out, Hi-Lite Scan playback starts from the point at which SEARCH (I◄◄/►►I) is released.*
- *Hi-Lite Scan cannot be applied to the programmed tracks.*
- *If the HI-LITE is pressed during program playback, the programmed contents will be erased.*

TO PLAY ONLY DESIRED TRACKS/DISCS



Program playback - To program tracks/ discs in desired order

1 **During stop mode, press PROGRAM.**
- PGM indicator lights.

2 **Press the DISC NUMBER button which contains the track to be programmed.**
To program entire discs, enter the desired disc numbers with the DISC NUMBER buttons and go to step 5.
- When DISC NUMBER is pressed, "AL" (all tracks) appears on the display.

3 **Press SEARCH (⏮/⏭) so that the desired track number appears on the display.**

4 **Press PROGRAM.**

5 **Repeat steps 2 through 4 for other tracks to be programmed.**

6 **Press PLAY ►.**
The tracks are played in the programmed order. When all programmed tracks have been played, the player enters stop mode.

Ⓐ **To stop Program playback, press STOP ■.**

- Programs containing up to 36 steps can be created.
- To go to the previous or next step in a program, press SEARCH (⏮/⏭).

NOTE:
If PROGRAM is pressed during playback, the PGM indicator lights but programming cannot be carried out.

Programming a pause

Inserting a pause in your program can be very useful when carrying out recording. Press PAUSE ⏸ instead of entering a track number. "PA" appears on the display panel.

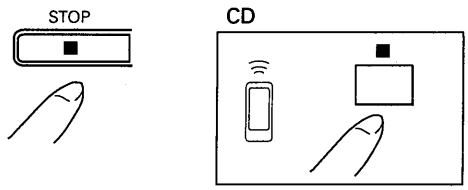
- For example, when recording on both sides of a cassette tape, if you program a pause after the last track to be recorded on the first side, program playback will pause at that point to allow you to switch tape sides. To resume program playback after the player enters pause mode, press PAUSE ⏸.

NOTES:

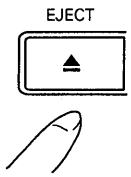
- *A pause cannot be programmed at the beginning of a program (P-01), nor can two pauses be programmed one after the other.*
- *A pause inserted in a program is counted as one step.*
- *If a pause is programmed as the last step of a program, the player will not enter pause mode.*

To clear all of the program contents

Ⓐ : During stop mode, press STOP ■.



Ⓑ : When the magazine is ejected, the program contents will be cleared.



HOW TO HANDLE CASSETTE TAPES

CHECK CASSETTE BEFORE USE

Bear in mind the following points before loading a cassette tape.

Is the tape loose, or is some of the tape sticking out of the cassette?

If some of the tape is projecting outside the cassette shell or if the tape is loose, it may not feed between the capstan and pinch roller. This will prevent the tape from being transported or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack. (Fig. A) Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

How can you prevent accidental erasure?

A cassette is provided with accidental erasure prevention tabs so that important recordings will not be erased accidentally. When the tab (Fig. B) on the cassette shell is broken out with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the recording (REC) button, so valuable recordings will not be erased in error.
To re-record on a cassette whose tabs have been broken out, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.
In case of metal tape or chrome tape, take sufficient care that the detection hole is not blocked.
When this hole is blocked, the automatic tape selector mechanism does not operate correctly.

NOTE:

The accidental erasure prevention tabs are located at the top left on both sides A and B (1 and 2), so that material on each side can be prevented from being erased in error.

TIPS ON USING CASSETTE TAPES

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for approx. 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt or oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit. Use tapes of 90 minutes or less.

Fig. A

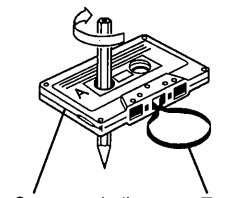


Fig. B

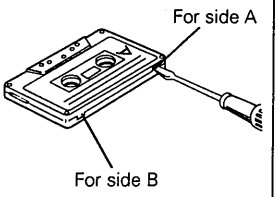
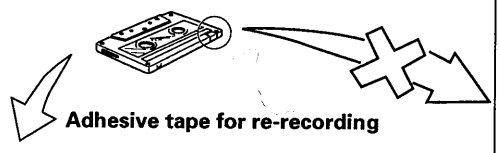


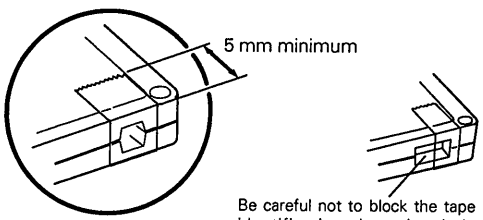
Fig. C

NOTE FOR RE-RECORDING ON A CASSETTE TAPE WHICH HAS A BROKEN TAB



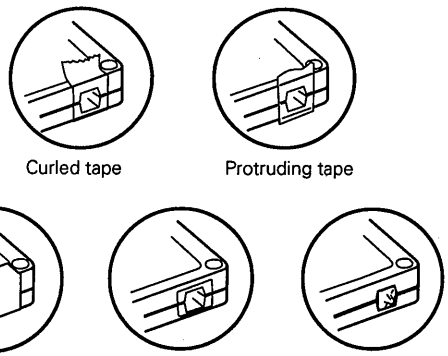
CORRECT METHOD OF APPLYING TAPE

- Apply two layers of cellophane tape.
- Apply the tape tautly so that it does not rise up.



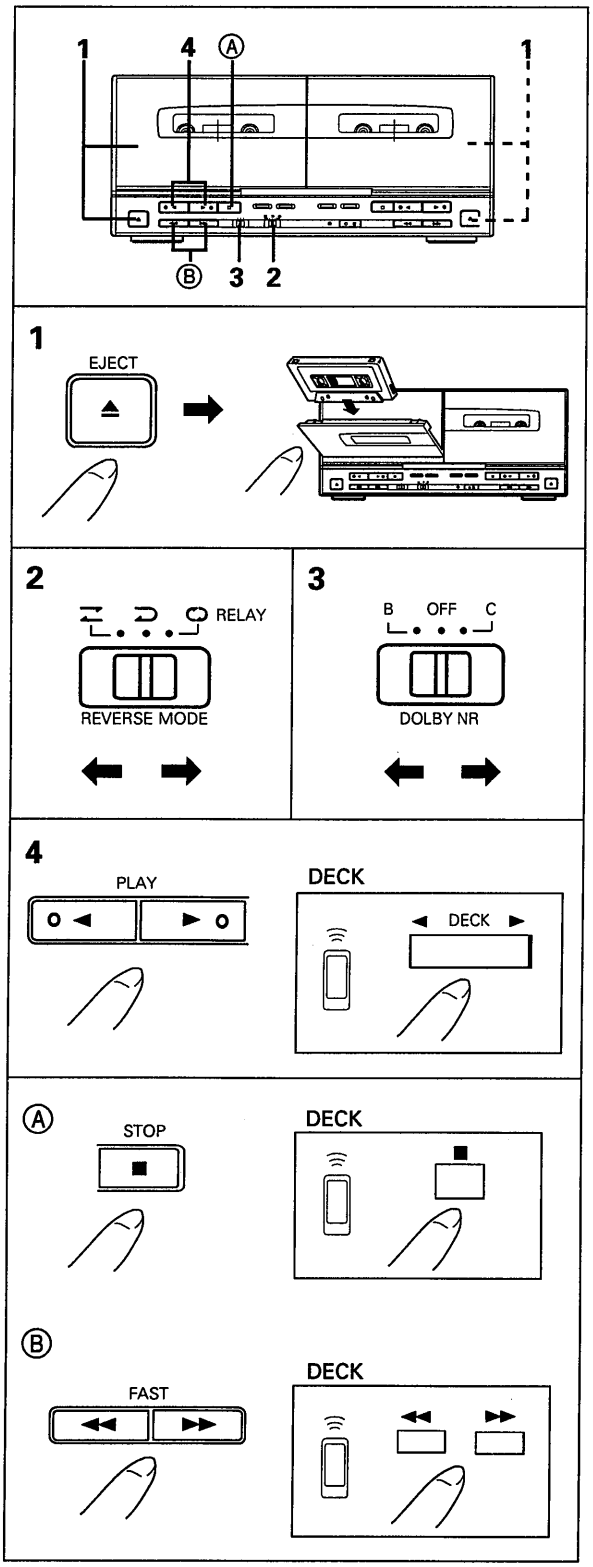
INCORRECT METHOD OF APPLYING TAPE

THIS MAY RESULT IN AN ACCIDENT


Curled tape
Protruding tape
Applying vinyl tape, gum tape, or other tape apart from cellophane tape.
Applying top portion only.
Insertion of an eraser or the like.

After removing the cellophane tape, completely wipe away all traces of adhesive. Use only alcohol.

PLAYING TAPES



Basic operation

- Tapes may be played back in Deck I or Deck II but not in both decks at the same time.

1 Press EJECT ▲ and load a recorded tape, then push in the cassette door until it locks.

2 Set REVERSE MODE.

⇄: To play on one side of a tape.
⇉: To play both sides of a tape.
↻: To play both sides of a tape repeatedly 8 times (16 sides).

3 Set DOLBY NR to the same position used for recording.

Tapes recorded using Dolby noise reduction should always be played back with the noise reduction system on.

4 Press PLAY (► or ◄).

►: Forward playback
◄: Reverse playback

Ⓐ To stop playback, press STOP ■.

Ⓑ To fast forward or rewind, press FAST ►►/◄◄ during stop mode.

To operate Deck II with the remote control unit, press the desired deck operation button while pressing SHIFT DECK II.

NOTES:

- *If the power is switched off while the tape is running, you may not be able to open the door. In this case, switch on the power again and press EJECT once more.*
- *Confirm that the deck has stopped before pressing EJECT.*

Auto Stop Mechanism

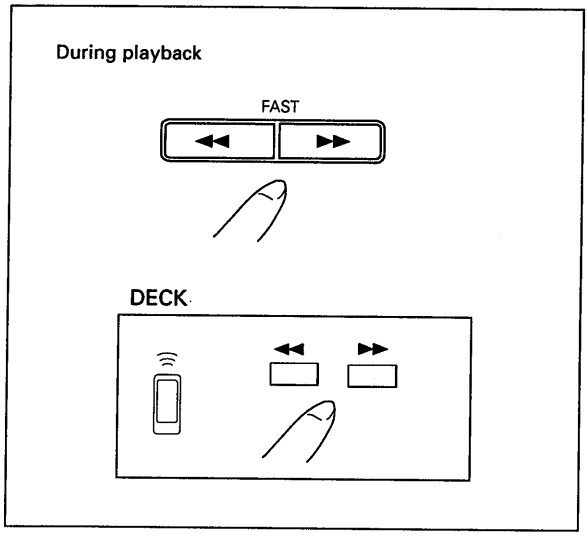
This mechanism automatically stops the tape when the end of the tape is reached.

The Dolby NR System

The Dolby NR system are designed to reduce high-frequency noise (tape hiss) generated during playback. The level of low-volume, high-frequency sounds is increased during recording and decreased by the same amount during playback to restore the original level. At the same time, high-frequency noise (the most easily perceived by the human ear) is attenuated as well.

Dolby B-type NR system reduces high-frequency tape noise, widening the dynamic range.

Dolby C-type NR system is even more powerful, applying the noise reduction effect to a wider spectrum of frequencies from the middle range.



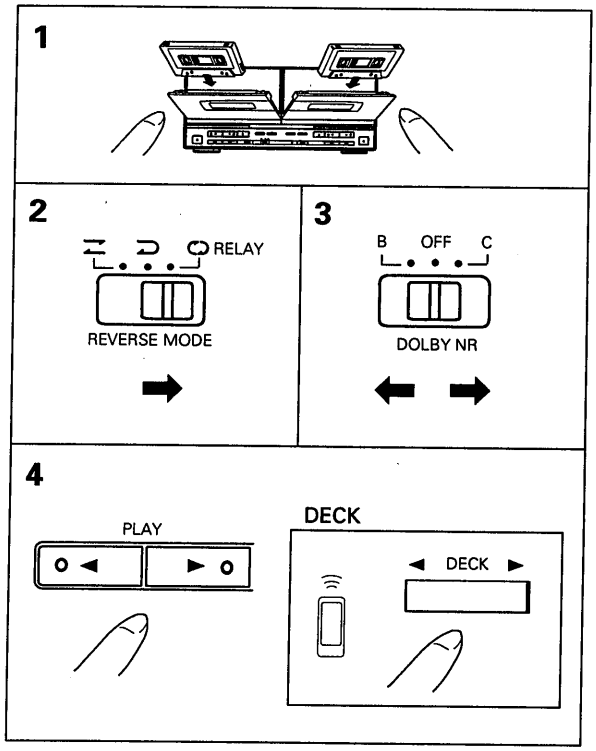
Music search - Skipping forward or backward to play back a desired selection

During forward playback (►)
To listen to the next selection or beyond, press ►► as many times as the number of selections to be skipped.
To listen to the selection being currently played from the beginning, press ◄◄ once. To return to the previous selection or more, press ◄◄ as many times as the number of selections to be skipped plus one.

During reverse playback (◄)
To listen to the next selection or beyond, press ◄◄ as many times as the number of selections to be skipped.
To listen to the selection being currently played from the beginning, press ►► once. To return to the previous selection or more, press ►► as many times as the number of selections to be skipped plus one.

NOTES:
Music search functions by detecting blanks between selections. In the following cases, the music search may not function properly. This is not, however, a sign of unit malfunction.

- *When using a tape with blanks between selections less than 4 seconds long.*
- *When listening to tapes with long low-level parts, like classical music, or with sound breaks several seconds long within selections.*
- *When listening to recorded conferences or talk shows, where sound is interrupted.*
- *When using tapes with noise in the blanks between selections.*



Relay playback

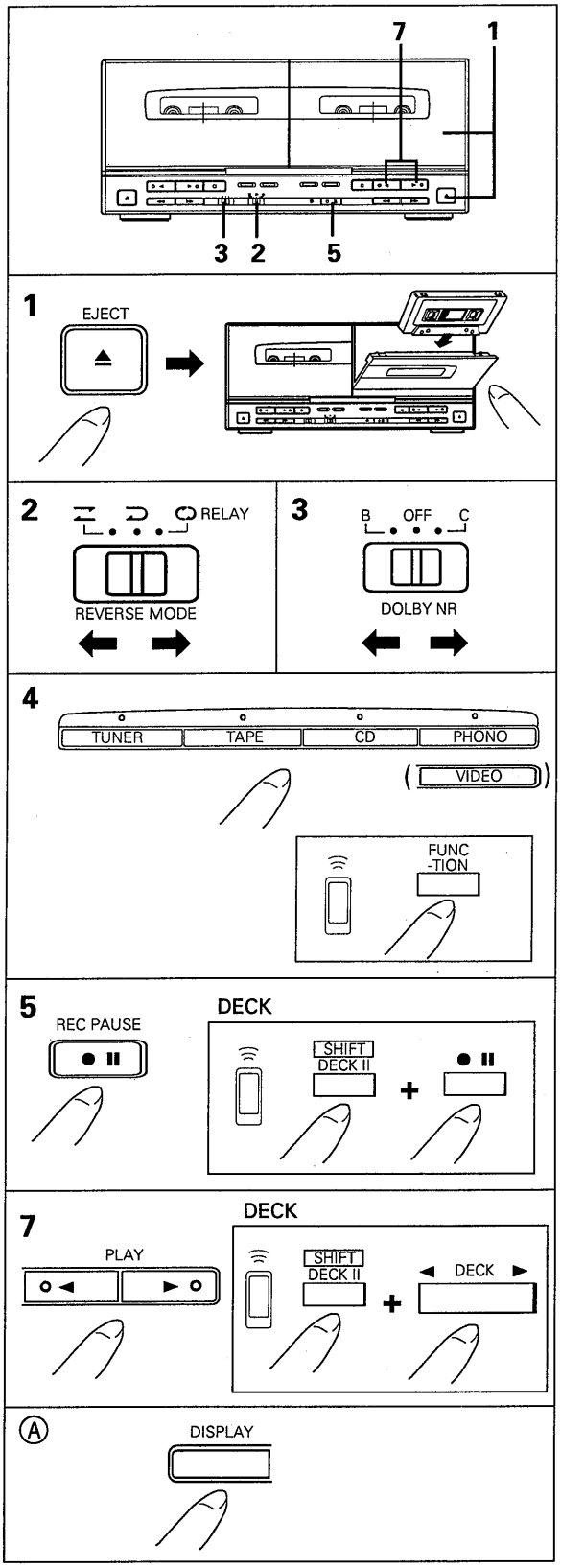
- Relay playback is possible from Deck I to Deck II, or from Deck II to Deck I. When playback ends on one deck, the other deck automatically starts playing.

1 Load recorded tapes in Deck I and Deck II.
2 Set the REVERSE MODE switch to ↻.
3 Set the DOLBY NR switch to the same position used for recording.
4 Press the appropriate PLAY (► or ◄) on Deck I or Deck II.

- Relay playback is repeated as follows (32 sides maximum):

DECK I forward play (►) → DECK I reverse play (◄)
↑ ↓
DECK II reverse play (◄) ← DECK II forward play (►)

To stop relay playback:
Press STOP ■ of the operating deck.



Recording on tape

- Use the normal tape or chrome tape.
- Material can be recorded on Deck II only. Recording is not possible on Deck I.

1 Load the tape for recording into Deck II.
- Check to see that the accidental erasure prevention tab has not been broken off.
- Wind the tape forward past the leader to the start of the magnetic coated portion.

2 Set REVERSE MODE.

⇄: To record on one side of a tape.
⇉, ↻: To record on both sides of a tape (From forward to reverse direction only).

3 Set the DOLBY NR switch to the desired position.
- A tape recorded using the DOLBY NR system must be played back using the same system.

4 Select the program source to be recorded using the function buttons on the receiver.

5 Press REC PAUSE (● II).
The deck enters record-standby mode.

6 Press PLAY (► or ◄) to start recording.
- The recording level is adjusted automatically.

7 Play the program source to be recorded.

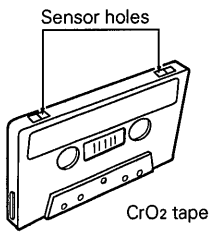
To stop recording:
Press STOP ■.

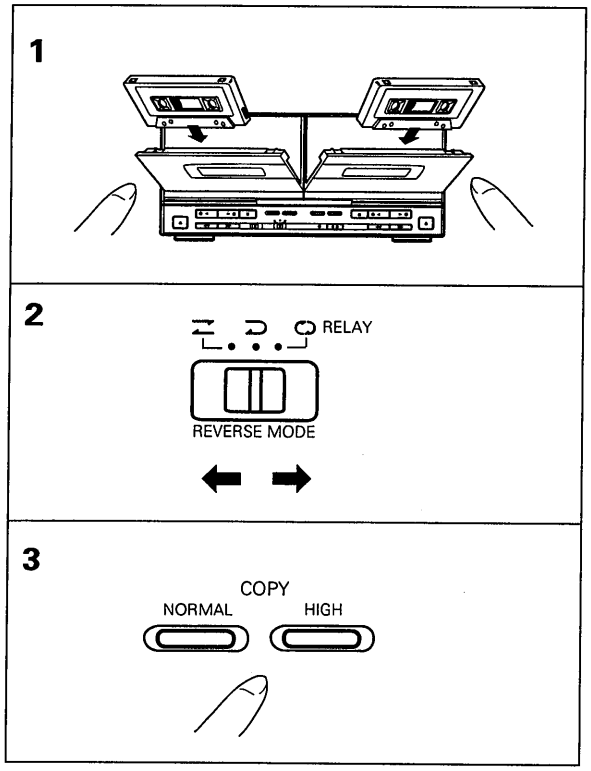
To stop recording temporarily:
Press REC PAUSE (● II). To resume recording, press PLAY (► or ◄).

Ⓐ To display elapsed recording time:
Each time DISPLAY is pressed, the display switches between current time and elapsed recording time.

NOTES:
- *The function cannot be switched during recording.*
- *During recording, you can operate the SOUND FIELD CONTROL buttons but the resulting sound is not recorded.*

AUTOMATIC TAPE SELECTOR FUNCTION
This unit (Deck I and Deck II) is equipped with an automatic tape selector function which utilizes the sensor holes on the tape cassette to determine the type of tape being used, in order to set the deck to match the tape recording bias and equalization.





Copying a tape

The contents of the tape in Deck I can be copied onto the tape in Deck II.

1 Load the recorded tape into Deck I and the tape for recording into Deck II.
- Tape copying begins in the forward direction (►).
- Wind the tape forward past the leader to the start of the magnetic coated portion.

2 Set REVERSE MODE.

⇄: One side is copied from Deck I to Deck II.
⇉, ↻: Both sides are copied from Deck I to Deck II.

3 Press COPY NORMAL or HIGH.

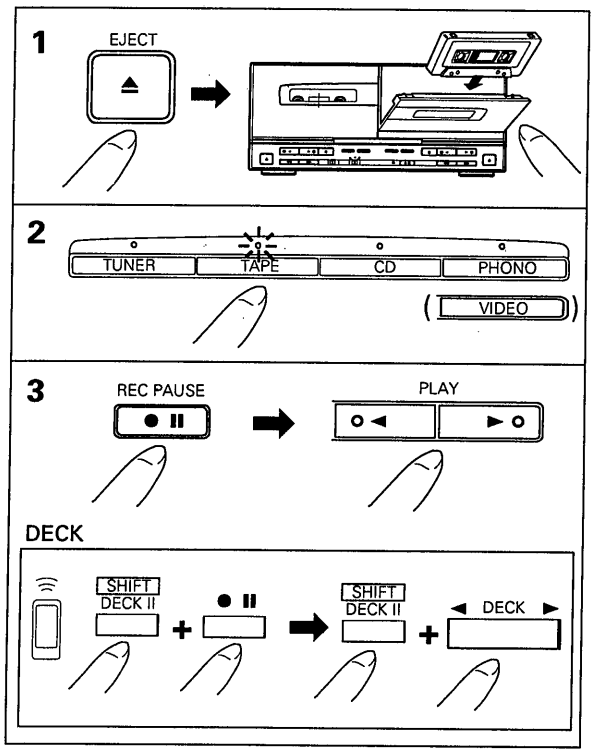
NORMAL: for tape copying at normal speed.
HIGH: for tape copying at about twice normal speed.

To stop copying:

Press one of the STOP ■ buttons. Both decks will stop simultaneously.

- If a tape recorded with the DOLBY NR system is copied, the copied tape will also be recorded automatically with the DOLBY NR system regardless of the setting of the DOLBY NR switch. If a tape recorded without the DOLBY NR system is copied, the copied tape will also be recorded automatically without the DOLBY NR system.
- To perform normal copying while listening to playback, set the function button on the receiver to TAPE and select the appropriate DOLBY NR switch position.
- The tape copy mode is canceled when the end of either of the tapes is reached, so it is advisable to use tapes of the same length.

Note on High-Speed Copy:
When performing high-speed copy, an interference beep might be recorded if there is a TV nearby. In this case, use normal speed copy or turn the TV power off.

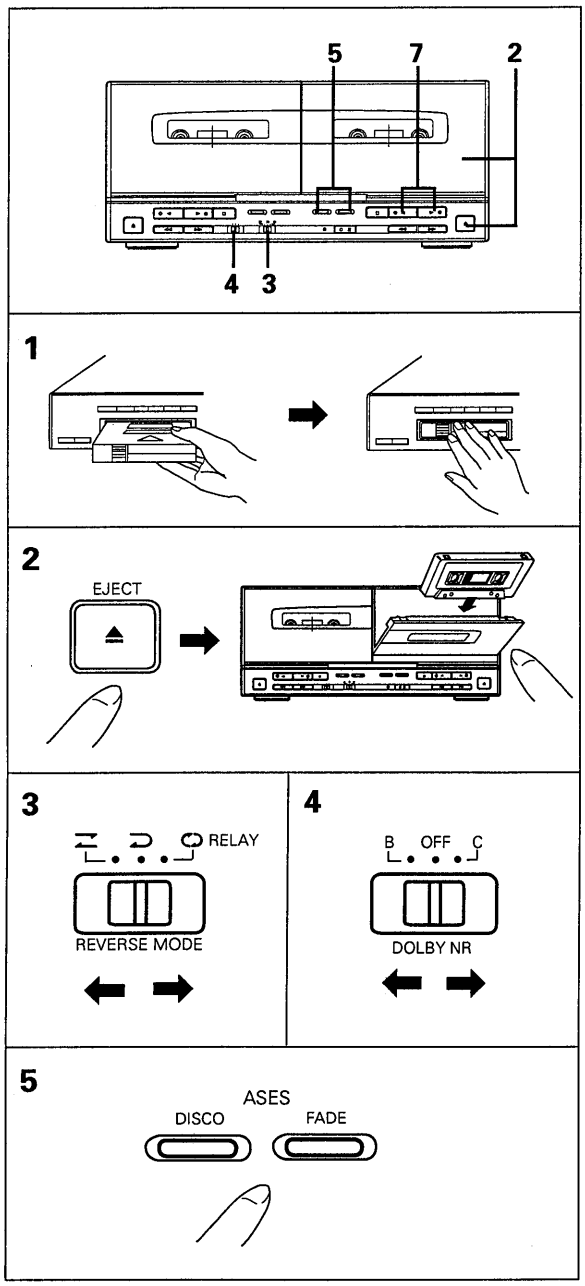


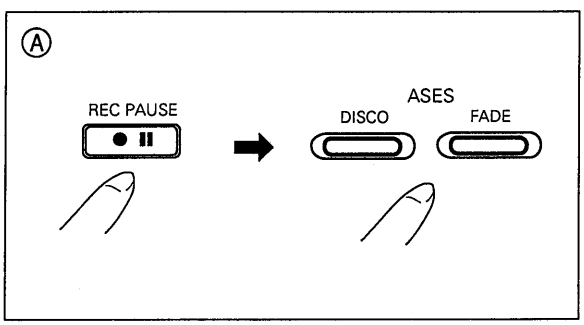
To erase the contents of a tape

1 Load the tape to be erased into Deck II.
- Check to see that the accidental erasure prevention tab has not been broken off.

2 Set the function button on the receiver to TAPE.

3 Press REC PAUSE (● II) and PLAY (► or ◄).





A.S.E.S. (Auto Synchro Editing System)

For automatic recording of a CD to a cassette tape.

1 Load the CD.
When programming is performed, tracks will be played in the programmed order.

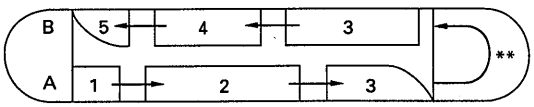
2 Load the tape for recording into Deck II.
Recording should begin in the forward direction (►).

3 Set the REVERSE MODE switch.
⇄: To record on one side of the tape.
⇉, ↻: To record on both sides of a tape.

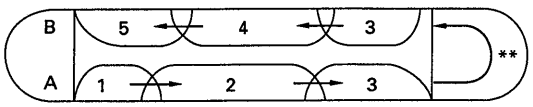
4 Set the DOLBY NR switch to the desired position.

5 Press ASES (FADE or DISCO).
FADE: Fade-out occurs at the tape end.
DISCO: Cross-fade* occurs between tracks and fade-out occurs at the tape end.
*Cross-fade:
The end of the track being faded out is overlapped with the beginning of the next track being faded in.
When the track playing time is less than 1 minute, the cross-fade operation may not be carried out properly.

FADE



DISCO



A, B: Indicates the side of the tape.
1 – 5: Indicates the number of the track.
**: Indicates the leader part of the tape.

- When recording on both sides, and the tape ends in the middle of a track in the forward (►) direction, recording starts from the beginning of the track when it continues in the reverse (◄) direction.
- A 10-second blank is recorded at the beginning of the tape.

To stop A.S.E.S. during recording:

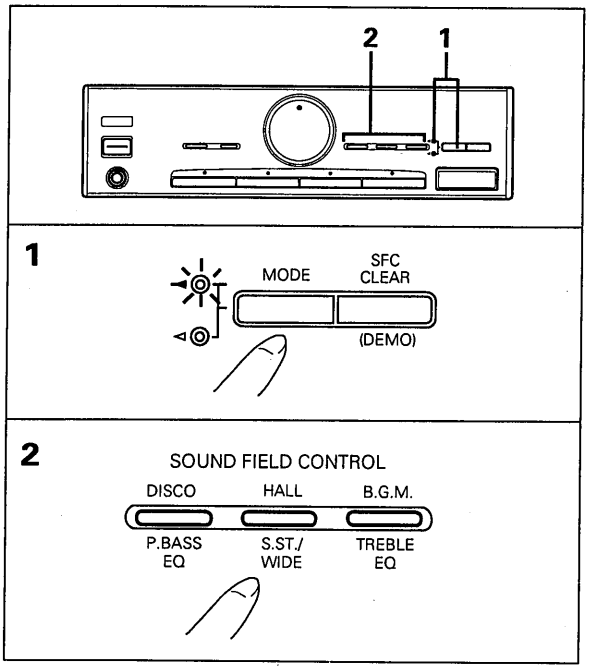
Press Deck II's STOP button or press the CD STOP button.

Ⓐ To resume recording with A.S.E.S.

When the unit finishes A.S.E.S., another CD can be recorded with A.S.E.S. from that point.
Perform steps 1 through 4. When you want to change to another CD, press REC PAUSE (● II) and then ASES (DISCO or FADE).

- Pressing FADE starts recording without a 10-second blank. Pressing DISCO rewinds the tape at the normal playback speed for about 20 seconds and starts recording with cross-fade.

ADJUSTING THE SOUND (SOUND FIELD CONTROL OPERATION)

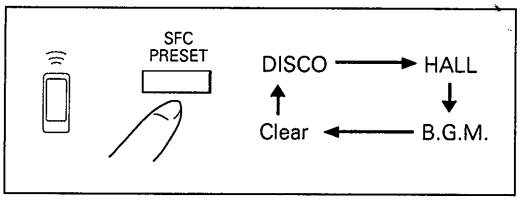


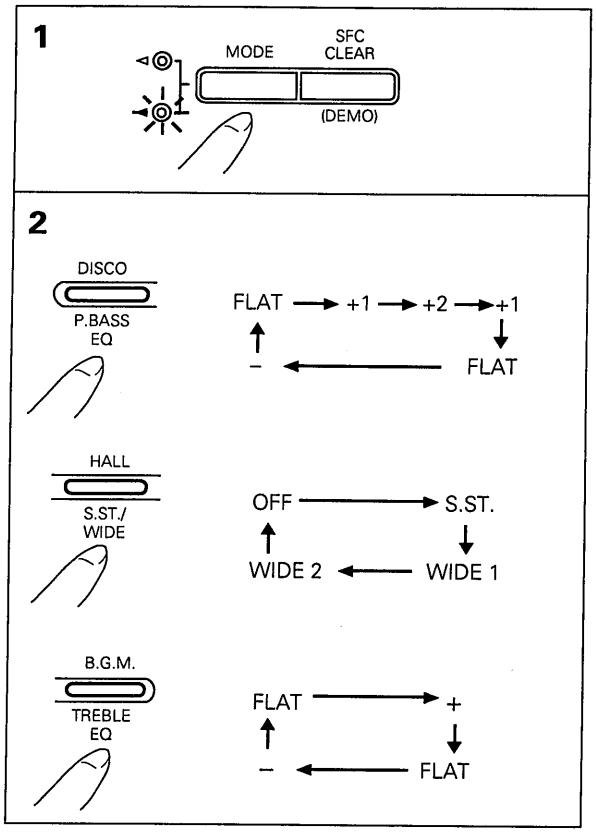
Selecting a preset sound setting

1 Press MODE to select preset mode.
The preset mode indicator lights.

2 Select one of the three settings with the SOUND FIELD CONTROL buttons.

DISCO: This boosts bass and treble to deliver a powerful, more dynamic sound.
HALL: Provides a reverberation effect like that produced in a concert hall.
B.G.M.: Gives you a wide sound with lowered bass and treble response.





Adjusting the sound in manual mode

1 Press MODE to select manual mode.
The manual mode indicator lights.

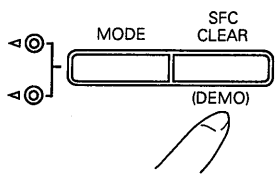
2 Adjust the sound using P.BASS EQ, S.ST./ WIDE and TREBLE EQ.

P.BASS EQ :
Adjusts the low-frequency sound level.
Each time P.BASS EQ is pressed, the setting changes in the following sequence: FLAT → +1 → +2 → +1 → FLAT → – .

S.ST./WIDE (Simulated Stereo/Stereo wide):
Creates a more expansive sound image.
Each time S.ST./WIDE is pressed, the setting changes in the following sequence: OFF → S.ST.(Simulated Stereo) → WIDE 1 → WIDE 2.

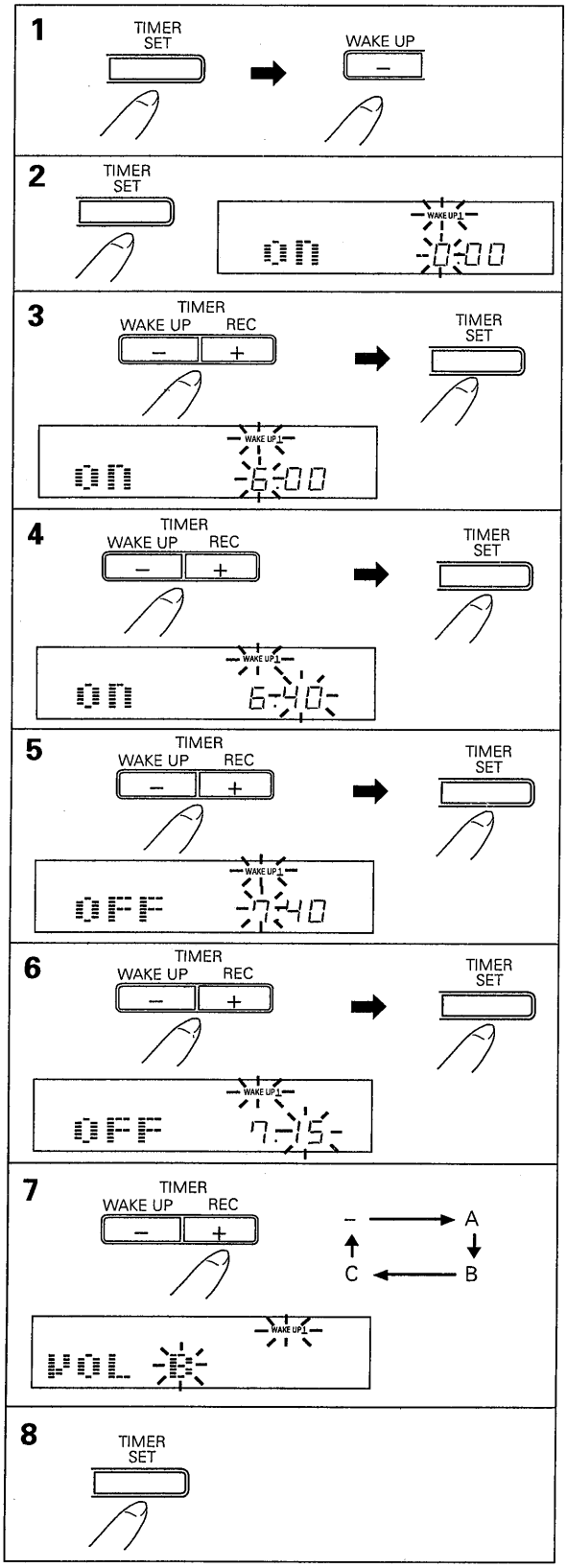
TREBLE EQ:
Adjusts the high-frequency sound level.
Each time TREBLE EQ is pressed, the setting changes in the following sequence: FLAT → + → FLAT → –.

To clear SOUND FIELD CONTROL settings



Press SFC CLEAR.
P.BASS EQ, TREBLE EQ and S.ST./WIDE settings are canceled.

TIMER PLAYBACK



Timer setting

A compact disc, cassette tape or radio broadcast can be used instead of an alarm clock.
Timer playback begins every day at the same time as long as the timer playback mode is not canceled.
You can set two different timers; WAKE UP 1 and WAKE UP2.

Before setting the timer:

1. Set the clock.
2. Set the SOUND FIELD CONTROLs as desired.
3. Select the desired program source with the function buttons.
4. With a CD, load a CD into the player, and set REPEAT or RANDOM if necessary.
   With a cassette tape, load a cassette tape into the deck, specify the tape running direction with PLAY ◄ or ► and stop the tape.
   With a preset station, select the station No.

Example: Using WAKE UP 1 to play a CD from 6:40 to 7:15.

1 Press TIMER SET and then (within 5 seconds) press WAKE UP (–).
Press WAKE UP once to select WAKE UP 1.
Press WAKE UP twice to select WAKE UP 2.

2 Press TIMER SET within 5 seconds.

3 Set the wake up (ON) hour using WAKE UP (–)/REC (+) and press TIMER SET.

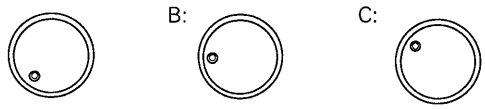
4 Set the wake up (ON) minute using WAKE UP (–)/REC (+) and press TIMER SET.
If you make no further changes within about 5 seconds, the OFF time is set as one hour after the ON time.

5 Set the turn off hour using WAKE UP (–)/REC (+) and press TIMER SET.

6 Set the turn off minute using WAKE UP (–)/REC (+) and press TIMER SET.

7 Set the desired volume level using WAKE UP (–)/REC (+).
You can select from among four volume level settings. Each time you press REC (+), the volume level setting changes in the following sequence: "–" → "A" → "B" → "C".
– : Present volume control setting.

A: B: C:



8 Press TIMER SET.
This completes timer setting.
Timer on time, timer off time, volume level setting and function setting are displayed in order.

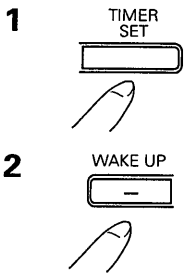
[To activate the timer]

9 Press WAKE UP (–) and WAKE UP 1 or WAKE UP 2 will light in the display.
Press once for WAKE UP 1.
Press twice for WAKE UP 2.
- The TIMER indicator also lights in the display.

10 Turn the power off with POWER STANDBY/ON.

Tape playback:
Timer playback is possible with a cassette tape loaded in deck I or deck II. When tapes are loaded into both decks, relay playback will be carried out.

To check timer settings



1 **Press TIMER SET.**
2 **Press WAKE UP within 5 seconds.**
Press once to select WAKE UP 1.
Press twice to select WAKE UP 2.
3 **After 5 seconds, the display changes to the check mode, and timer settings are displayed in order.**

To change timer settings

To change all of the timer settings, start over again, inputting the settings that you want.
To change only one of the timer settings (after pressing TIMER SET and WAKE UP 1 or 2), press TIMER SET repeatedly until the display shows the item that you wish to change. Then use "–" and "+" to adjust the setting. Finally, repeatedly press TIMER SET to advance to the end of the procedure.

NOTE:
If the AC power cord is unplugged or a power failure occurs, set the timer again.

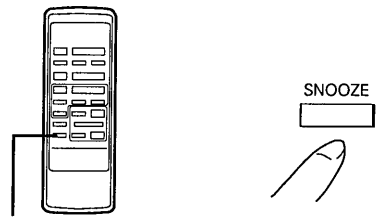
If you make a mistake while setting the timer

Go ahead to the next item and continue setting the various items until you finish. Then use the "To change timer settings" procedure to change the value of the item that was incorrect.

Turning the timer on and off

After entering the timer settings, check the display section to confirm which timer is on. The one that is lit (WAKE UP 1 or 2) is the one that will be executed.
If you press WAKE UP to turn off the indication, the timer will not operate. However, since the settings remain stored in memory, you can press WAKE UP again to reactivate the timer.

The SNOOZE function

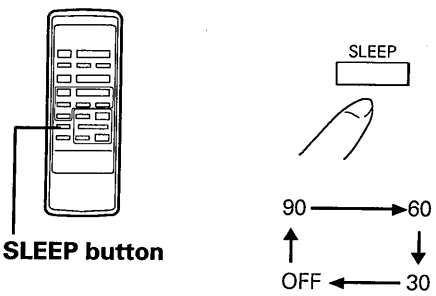


SNOOZE button

After timer playback begins, you can press SNOOZE on the remote control unit to turn the power off temporarily. It comes back on after about 5 minutes.

NOTE:
Power will stay off and play will not resume after 5 minutes if SNOOZE is pressed when there is less than 5 minutes time remaining in the timer setting.

SLEEP TIMER



SLEEP button

Sleep timer - Automatically turns off power.

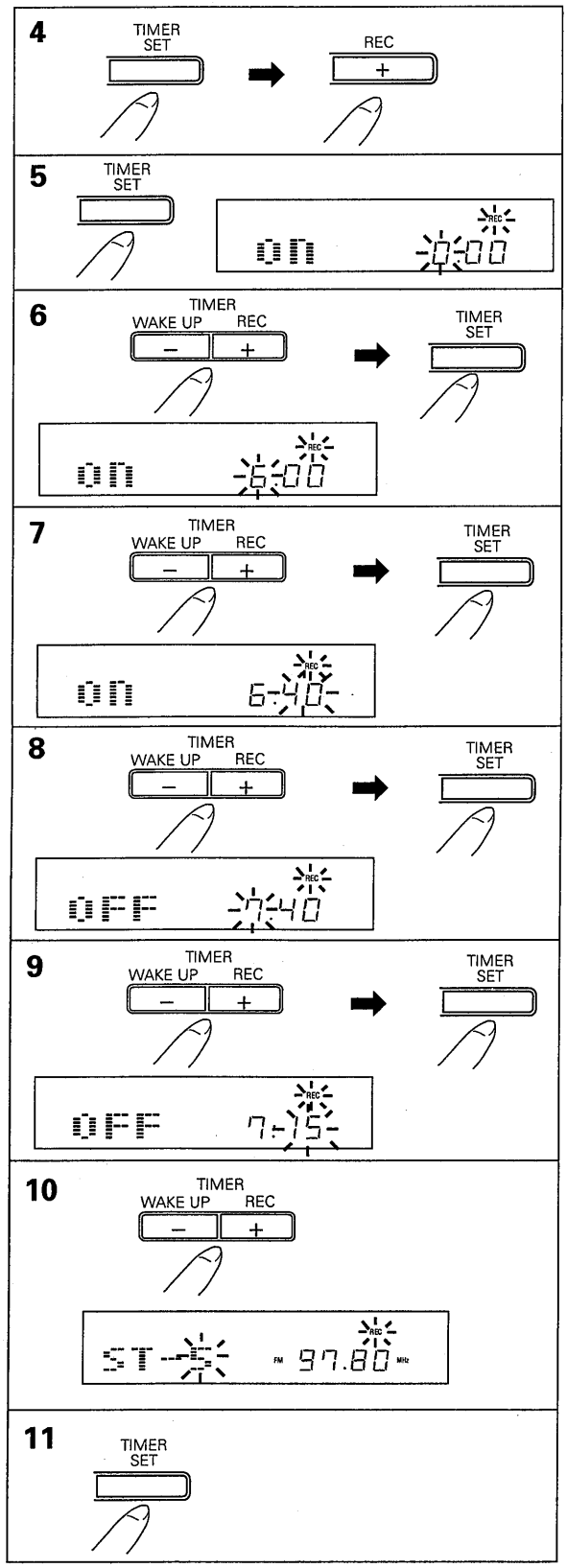
Power turns off automatically after the specified time has elapsed.
Each time SLEEP is pressed, the setting changes in the following sequence: 90 → 60 → 30 → OFF.
When sleep timer operates, the display section becomes less bright. (Dimmer function)

Auto sleep

If SLEEP is pressed during recording, auto sleep is switched on. When recording finishes, power is automatically switched off.

NOTE:
If you press SLEEP during SLEEP operation, the time remaining till the power turns off is displayed. Do not press SLEEP any more. Otherwise, the setting changes and the sleep timer cannot function properly.

TIMER RECORDING



Timer setting

This allows unattended recording of radio broadcasts.

- Timer recording will be carried out with a preset station. Store the station to be recorded in preset memory beforehand.
- The timer recording mode is deactivated after it has been performed once.

Example: ST-5 (Station No. 5) is recorded from 6:40 to 7:15.

1 **Load the tape for recording into Deck II.**
Timer recording should begin in the forward direction (►).
- Check to see that the cassette's accidental erasure prevention tabs have not been removed.

2 **Set REVERSE MODE on the cassette tape deck.**
To record on both sides of the tape with the " ⇉ , ⇆ " position.

3 **Set DOLBY NR on the cassette tape deck to the desired position.**

4 **Press TIMER SET and then (within 5 seconds) press REC (+).**

5 **Press TIMER SET within 5 seconds.**

6 **Set the recording (ON) hour using WAKE UP (–)/REC (+) and press TIMER SET.**

7 **Set the recording (ON) minute using WAKE UP (–)/REC (+) and press TIMER SET.**
If you make no further changes within about 5 seconds, the OFF time is set as one hour after the ON time.

8 **Set the turn off hour using WAKE UP (–)/REC (+) and press TIMER SET.**

9 **Set the turn off minute using WAKE UP (–)/REC (+) and press TIMER SET.**

10 **Set the desired station using WAKE UP (–)/REC (+).**

11 **Press TIMER SET.**
This completes timer setting.
Timer on time, timer off time and station No. are displayed in order.

[To activate timer recording]

12 **Press REC (+) and REC will light in the display.**
- The TIMER indicator also lights in the display.

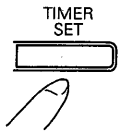
13 **Turn the power off with POWER STANDBY/ON.**

NOTES:

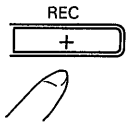
- *When timer recording starts, the volume is set to minimum automatically. If you want to listen to the sound, adjust the volume with the VOLUME control.*
- *If you do not turn off the power after setting the timer, timer recording will not be carried out.*
  If timer settings are overlapped, the later timer setting will not be carried out.

To check timer settings

1



2



1 **Press TIMER SET.**
2 **Press REC (+) within five seconds.**
3 **After five seconds, the display changes to the check mode, and timer settings are displayed in order.**

To change timer settings

To change all of the timer settings, start over again, inputting the settings that you want.
To change only one of the timer settings (after pressing TIMER SET and REC), press TIMER SET repeatedly until the display shows the item that you wish to change. Then use "–" and "+" to adjust the setting. Finally, repeatedly press TIMER SET to advance to the end of the procedure.

If you make a mistake while setting the timer

Go ahead to the next item and continue setting the various items until you finish. Then use the "To change timer settings" procedure to change the value of the item that was incorrect.

Turning the timer on and off

Confirm that the REC indicator is lit on the display.
Timer recording ends after being performed once. However, since the settings remain stored in memory, you can reactivate the timer by pressing TIMER REC so that the REC indicator is lit again.

About timer setting priority

ON time: If REC timer and WAKE UP 1/2 timer are both at the same ON times, REC timer takes priority.
OFF time: When REC timer, WAKE UP 1/2 timer and SLEEP timer operate, earlier OFF time takes priority.

MAINTENANCE

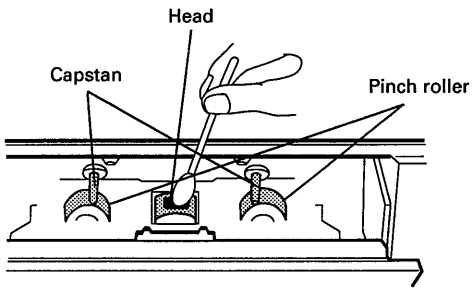
Cleaning the head section

The heads, capstan and pinch roller are parts which are liable to become dirty quite easily, In particular, if the heads are dirty, the high frequency components of the sound will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of sound quality. It is therefore recommended that the head section be cleaned regularly.

- Press EJECT to open the cassette door.
- Dip a cleaning swab into head cleaning fluid and use it to wipe the head, capstan, and pinch rollers. Wait 2-3 minutes until the cleaning fluid dries.

NOTE:

This unit uses a head-slant standby system, with the result that the heads are mounted at an angled position.



Demagnetizing the head

The recording/playback head becomes magnetized when you use the tape deck for prolonged periods of time. This results in noise being generated and the treble dropping off during recording and playback. The recording/playback head should therefore be demagnetized regularly with a commonly sold head demagnetizer.

For further details, refer to the operating instructions accompanying your head demagnetizer.

NOTES:

- *Do not hold screwdrivers, metal objects or magnets close to the heads.*
- *When demagnetizing the heads, be sure the unit's POWER switch is in the STANDBY position.*

Maintenance of external surfaces

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

General

Symptom	Cause	Remedy
There is no power.	• AC cord is unplugged.	• Plug power cord into wall socket.
No sound from speakers.	• Volume is turned all the way down. • Speaker cords are disconnected. • Speaker cords are connected with vinyl insulation still on. • Function is not set to the desired listening source. • Connection cords are not connected or are incorrectly connected.	• Raise volume setting. • Connect speaker cords correctly. • Strip vinyl insulation from speaker wire tips before connecting. • Select correct function. • Connect correctly.
Sound from only one speaker.	• One of the speaker cords is disconnected or damaged.	• Connect correctly or replace with new cord.
Strange sounds heard (or recorded from) tape, CD or radio.	• TV is on. • The unit is too close to TV.	• Turn off TV. • Move TV away until interference stops.

Tuner

No AM reception.	• Antenna not connected. • Wrong radio band. • Station not tuned in.	• Connect antenna correctly. • Set to desired radio band. • Tune in station.
Beat noise heard.	• TV is on. • Loop antenna position bad.	• Turn off TV or move TV away. • Change loop antenna position.
Noise heard.	• Interference from nearby fluorescent light, hair dryer, or other electrical appliance.	• Stop using device causing interference.
Sound is distorted.	• Antenna in poor position. • Broadcast is weak. • Interference from other electrical devices or multipath reception.	• Change antenna position. • Use external antenna. • Change antenna position.
There is no stereo sound.	• Broadcast signal is weak, antenna input is insufficient. • The AM-NR/FM-MONO button is turned on.	• Change to a multi-element external antenna. • Press AM-NR/FM-MONO so that the NR/MONO indicator goes out.

Clock and Timer

No time indication.	• There was a power outage. • AC plug was pulled out.	• Set time again. • Set time again.
Timer does not work.	• Current time is not set. • Start and/or stop time is not set. • Timer is not on.	• Set current time. • Set ON and OFF times. • To use timer, press WAKE UP (–) or REC (+) so that the timer display lights.

TROUBLESHOOTING

CD player

Symptom	Cause	Remedy
When playback is started, it stops immediately. Pauses or stops during playback.	• Disc is loaded upside down. • Dirt, etc., on the disc.	• Load the disc correctly with the label side DOWN. • Clean the dirt from the disc and then play it again.
No sound	• Player is in pause mode.	• Press the PLAY or PAUSE button.
With certain discs, loud noise is produced, or play stops.	• Disc has bad scratch or warp. • Disc is extremely dirty.	• Replace the disc. • Clean the disc.

Cassette tape deck

Cassette door does not open. **Cassette door does not close.**	• Deck has not stopped. • Power was switched off while tape was running. • Cassette tape is incorrectly loaded.	• Press the STOP button. • Switch on power again. • Reload the cassette tape correctly.
Tape does not move.	• Deck is in pause mode. • Cassette inserted incorrectly.	• Press the PAUSE or PLAY button. • Put cassette in holder properly.
No sound heard from tape.	• Function not set to TAPE. • Playing unrecorded tape.	• Set to TAPE. • Play a recorded tape.
Cannot record.	• Erasure prevention tabs are broken off. • Dirty head.	• Apply adhesive tape over tab holes. • Clean head.
Previously recorded sounds remain.	• Dirty head.	• Clean head.
Cannot copy tape.	• One deck has no tape loaded. • Tape in Deck II has erasure prevention tabs broken off.	• Load tapes in both decks. • Use cassette that can be recorded on, or apply adhesive tape over tab holes.
Sound is muffled and unclear.	• Dirty head. • DOLBY NR system is ON when listening to a tape recorded without DOLBY NR.	• Clean head. • Use same noise reduction system for playback as for recording. (Do not play tapes recorded with different NR systems.)
Treble tones too strong.	• Tape recorded with DOLBY NR but played without.	• Play in same condition as recording. (Turn on DOLBY NR switch for tapes recorded with DOLBY NR.)

Remote control unit

Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window.	• Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle.

Abnormal functioning of this unit may be caused by lightning, static electicity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

SPECIFICATIONS

STEREO MULTI CD RECEIVER:XC-P410M

Amplifier section

[U.S. model]

Continuous Average Power Output is 25 Watts* per channel, min., at 8 ohms from 40 Hertz to 20,000 Hertz with no more than 0.9 % total harmonic distortion.**

[Canadian model]

Continuous Average Power Output is 22 Watts* per channel, min., at 8 ohms from 40 Hertz to 20,000 Hertz with no more than 0.9 % total harmonic distortion.**

Music Power (DIN) ..... 41 W + 41 W
Continuous Power Output (DIN) ..... 25 W + 25W
(1 kHz, T.H.D. 1%, 8 Ω)
Continuous Power Output (RMS)
U.S. model ..... 32W + 32 W
European, U.K. and Canadian models ..... 31 W + 31 W
(1 kHz, T.H.D. 5%, 8 Ω)
Frequency Response (VIDEO)** ..... 10 Hz to 50 kHz ±3dB
Signal-to-Noise Ratio
(DIN, Continuous Power/50 mW) ..... PHONO: 70 dB/60 dB
Total Harmonic Distortion
(1 kHz, 12.5 W, 8 ohms) ..... No more than 0.2%
Signal-to-Noise Ratio (IHF, short circuited, A network)
VIDEO ..... 70 dB
Input (Sensitivity/Impedance) ..... VIDEO: 150 mV/50 kΩ

FM/AM tuner section

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono: 12.8 dBf, IHF
(1.2 μV/75 ohms)
Sensitivity (DIN) ..... Mono S/N 26 dB: 1.0 μV/75 Ω
Stereo S/N 46 dB: 50.0 μV/75 Ω
Signal-to-Noise Ratio (IHF, 85 dBf Input) ..... Mono: 77 dB
Stereo: 73 dB
Signal-to-Noise Ratio (DIN) ..... Mono: 66 dB
Stereo: 60 dB
Distortion ..... Stereo: 0.5 % (1kHz)
Antenna Input ..... 75 ohms unbalanced

MW (AM) Tuner Section

Frequency Range
With 10 kHz step ..... 530 kHz to 1,700 kHz
With 9 kHz step ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Antenna ..... Loop Antenna

LW Tuner Section (For LW equipped models only)

Frequency Range ..... 153 kHz to 281 kHz
Sensitivity (IHF, Loop antenna) ..... 1500 μV/m
Antenna ..... Loop Antenna

CD Section

Type ..... Compact disc digital audio system
Frequency Response ..... 2 Hz to 20 kHz
Signal to Noise ratio ..... 96 dB or more (EIAJ)
Dynamic Range ..... 90 dB or more (EIAJ)
Wow and Flutter ..... Limit of measurement
(±0.001% W.PEAK) or less (EIAJ)

General

Operating temperature ..... +5°C to +35°C (+41°F to +95°F)

Miscellaneous

Power Requirements
U.K. model ..... a.c. 240 Volts ~, 50/60 Hz
European model ..... a.c. 220 Volts ~, 50/60 Hz
U.S. and Canadian models ..... AC 120V, 60 Hz
Power Consumption
European and U.K. models ..... 160 W
U.S. and Canadian models ..... 80 W
Dimensions
U.S. and Canadian models ... 260 (W) x 194 (H) x 309 (D) mm
10-4/16 (W) x 7-10/16 (H) x 12-3/16 (D) in
European and U.K. models .. 260 (W) x 194 (H) x 312 (D) mm
10-4/16 (W) x 7-10/16 (H) x 12-5/16 (D) in
Weight (without package) ..... 5.8 kg (2 lbs 10 oz)

TAPE DECK: CT-P410WR

Systems ..... 4 track, 2-channel stereo
Heads ..... "Hard Permalloy" recording/playback head x 1
"Hard Permalloy" playback head x 1
"Ferrite" erasing head x 1
Motor ..... DC servo 2 speed motor x 2
Wow and Flutter ..... No more than 0.09 % (WRMS)
Fast Winding Time ..... Approximately 95 seconds (C-60 tape)
Frequency Response (-20 dB recording):
CrO_2 tape ..... 35 Hz to 15,000 Hz ±6 dB
Normal tape ..... 35 Hz to 14,000 Hz ±6 dB
Signal-to-Noise Ratio
Dolby NR OFF ..... 56 dB
Noise Reduction Effect
Dolby B type NR ON ..... More than 10 dB (at 5 kHz)
Dolby C type NR ON ..... More than 19 dB (at 5 kHz)
Dimensions ..... 260 (W) x 116.5 (H) x 287 (D) mm
10-4/16 (W) x 4-9/16 (H) x 11-5/16 (D) in
Weight (Without package) ..... 2.9 kg (1 lbs 6 oz)

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.
** Measured by audio spectrum analyzer.

SPECIFICATIONS

SPEAKER SYSTEM

S-P410:

Enclosure ..... Bass reflex type
System ..... 3-way 3-speaker system
Loudspeakers:
  Woofer ..... 13 cm cone type
  Mid-range ..... 6.6 cm cone type
  Tweeter ..... 2.0 cm dome
Frequency Range ..... 50 to 20,000 Hz
Input Impedance ..... 8 Ω
Sensitivity ..... 86.5 dB/W at 1 m distance
Music Power (DIN) ..... 55 W
Dimensions ..... 170 (W) x 310 (H) x 210 (D) mm
6-11/16 (W) x 12-3/16 (H) x 8-1/4 (D) in
Weight ..... 3.0 kg
6 lbs 10 oz

S-P410V:

Enclosure ..... Bass reflex type
System ..... 3-way 3-speaker system
Loudspeakers:
  Woofer ..... 14 cm cone type
  Mid-range ..... 6.6 cm cone type
  Tweeter ..... 2.0 cm dome
Frequency Range ..... 55 to 20,000 Hz
Input Impedance ..... 8 Ω
Sensitivity ..... 86.5 dB/W at 1 m distance
Maximum Power ..... 30 W
Dimensions ..... 180 (W) x 310 (H) x 230 (D) mm
7-1/16 (W) x 12-3/16 (H) x 9-1/16 (D) in
Weight ..... 3.3 kg
7 lbs 2 oz

Accessories

Operating Instructions 1
Remote Control Unit 1
Dry Cell Batteries (AAA/R03) 2
FM T-type Antenna 1
AM Loop Antenna 1
Speaker cords (S-P410V only) 2
6-compact disc magazine 1

NOTE:

Specifications and design subject to possible modification without notice due to improvements.

The Magazine Type Multi-Play CD Players with mark and the Magazines with the same mark are compatible for 5-inch (12cm) discs.

Published by Pioneer Electronic Corporation.
Copyright © 1991 Pioneer Electronic Corporation.
All rights reserved.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS [USA] INC. 2265 East 220th Street, Long Beach, California 90810, U.S.A.
P.O. BOX 1720, Long Beach, California 90801, U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3, Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium, TEL: 03/750.05.11
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: [03] 580-9911

<91A02WY0D01>

Printed in Japan <RRB1089-A>